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ABSTRACT

This pilot study was undertaken to determine the relationship between measurable performance of engineers on the job and participation in continuing education (CE). The results of the study showed that CE participation was the dominant predictor of performance, while inherent ability and drive seemed less important. Participation in technical, business, and other CE were shown to be positively related to growth in compensation; participation in business CE was shown to be positively related to growth in supervisory responsibility. The results seem to indicate cumulative effects of CE participation over time and clearly show that CE can affect job performance more than other parameters such as ability and drive. (SK)

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ED199030

# THE RETURN ON INVESTMENT IN CONTINUING EDUCATION OF ENGINEERS

ALBERT J MORRIS
PRINCIPAL INVESTIGATOR

GENESYS SYSTEMS

U S DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION

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Variables List

Outcome Variables

ORC Relative compensation index

$$ORC = \frac{1}{T} \underset{T}{\text{sum}}\ Zit,$$

t represents 1 year time intervals, thus,
t = 2, 3, 4...
i = engineer index number
T = total time (i.e., max t) or selected intervals (i.e., 3 years)
N = total engineers

$$\text{where } Z\,it = \left[\frac{Yit}{\frac{1}{N}\underset{1}{\text{sum}}\ Yit} - 1\right] 10 \qquad \text{and } Yit = \frac{Xit - Xi(t-1)}{Xi\,(t-1)}$$

Xit represents the compensation adjusted by consumer-price index
Yit represents the compensation percentage increase from the (t-1)th time interval to the (t)th time interval for the (i)th engineer
Compensation refers to salary + bonuses

OAC	Absolute compensation adjusted by consumer-price index
OSP	Number of persons supervised
OCR	Chief engineer's ranking
OPT	Number of patents
OPB	Number of publications
OCT	Technical job challenge
OCM	Management job challenge
OAJA	Attitude about job assignment
OAJP	Attitude about job performance
OAFW	Attitude about relationship with fellow workers
OAPA	Attitude about prospects for advancement
OAFY	Attitude about your feelings about yourself
OAIP	Attitude about your intellectual perspective
OAFE	Attitude about your feelings about your employer
CEAJR	Attitude about how CE is job related
CEAIS	Attitude about how intellectually stimulating CE is
POLICY	Policy for kind of CE

Continuing Education Variables

CETOT	Total hours of all continuing education	(cumulative	total of	contact hours)
CETECH	Total technical continuing education hours	"		"
CEBUS	Total business continuing education hours	"	"	"
CEOTH	Total other continuing education hours	"	"	"

Ability Variables

IPR	Present supervisor report
IFR	First or early years supervisor report
IGPA	BS undergraduate gpa
ISCH	School
ISH	Academic honors
OCR	Chief engineer's ranking
Ph.D.	Having a Doctor's Degree
MS	Having a Master's Degree

Other Variables

TEMPLY	Year of first full time employment after last degree as full time student
DRIVE	Work agressively and diligently and spend extra hours when required

GENESYS SYSTEMS, INC.

THE RETURN ON INVESTMENT IN CONTINUING EDUCATION OF ENGINEERS.

STUDY FUNDED BY NATIONAL SCIENCE FOUNDATION GRANT—EPP75-21587.

PRINCIPAL INVESTIGATOR
Albert J. Morris
President, Genesys Systems, Inc.
ASST. PRINCIPAL INVESTIGATOR
Charles A. Martin-Vegue
Vice President, Genesys Systems, Inc.
STEERING COMMITTEE MEMBERS
Representing Industry
Donald L. Hammond
Director of Physical Electronics, Hewlett-Packard
Representing Universities
Jack Munushian
Prof. of E. E. and Director, ITV Network,
Univ. Southern California
Lionel V. Baldwin
Dean of Engineering, Colorado State University
Charles R. Vail
Associate Dean of Engineering,
Georgia Institute of Technology
Representing Government
John E. Leveen
Employee Development Officer,
NASA/AMES — Representing NASA
Herbert B. Rosenstock
Senior Scientist, Navy Research Laboratory —
Representing Navy
Eric A. Eber
Director of Education, Army Educ. Ctr., Ft. Belvoir —
Representing Army
Representing Professional Societies
Thomas F. Jones
Vice President of Research, M. I. T.—
Representing IEEE
Joseph M. Biedenbach
Director Continuing Education,
Univ. South Carolina — Representing ASEE
Howard W. Butler
Prof. Mech. Eng., West Virginia University —
Representing ASME
Representing Special Interest Groups
James F. Gibbons
Prof. E. E., Stanford University —
Representing National Acad. Eng.
Eugene J. Sullivan
Associate Director, Office of Educ. Credit, American
Council on Education — Representing ACE
John Enell
Vice President Research, American Management
Assoc. — Representing AMA
Consultants
Gene W. Dalton
Prof. Organizational Behavior,
Brigham Young University
Paul H. Thompson
Assoc. Prof. Organizational Behavior
Brigham Young University
Anthony L. Malo
Asst. Director, Center for Leadership Studies
Univ. Santa Clara
Peter N. Sherrill
Research Consultant
William R. Kincheloe
Senior Research Engineer, Stanford University
Charles M. Davis
General Manager, Association for Continuing
Education (ACE)
Kenneth S. Down
Director, ITV Network, Stanford University
Michael Scriven
Prof. U. C. Berkeley, Director, Evaluation and
Development Group

MEMORANDUM

FROM: Albert J. Morris, Principal Investigator, "The Return on Investment in Continuing Education of Engineers".

TO: Readers of the Final Report.

SUBJECT: Request for Comments.

1. The subject Report, in many ways, shows startling and totally unexpected results. Neither the Principal Investigator nor any of the Steering Committee or Consultants came even close to predicting the outcomes shown. What we expected to see--if we saw anything at all--was that participation in CE would show a very small effect on performance, whereas the measures of inherent ability used were expected to show proportionately large effects on performance. The reverse seems to be true for the engineers sampled, and we do not believe that this is an artifact attributable to the sample group, the data or the statistical methods used.

2. A number of suggestions have been made by reviewers of the Report relative to alternative explanations of the significant positive correlations shown between CE participation and performance. Included are:

   a. "The organizations sampled have policies which directly reward CE participation and which would therefore account for the correlations shown." This is simply not the case. No such policies exist.

   b. "Organizations encourage CE participation by the best performers, and these people would therefore show the strongest correlations." While some of this may be true, it is not an across the board phenomenon and such practices cannot explain the pervasive results shown.

   c. "The best performers are the most intellectually curious people, and they have personality characteristics which lead to higher levels of CE participation." While some of this is undoubtedly true, the persistence of correlations within ability groups tends to filter out this characteristic and still leaves CE participation as a significant determining factor.

3. As you will note from the Report, the results are based on a pilot group which is not necessarily representative of all engineers, or of engineers in all industries or in all geographic locations. Because the results are so interesting (and potentially so important), it has been suggested

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that a similar but expanded study be conducted nationwide in order to ascertain to what extent the results presently reported can be generalized.

4. Your comments on the Report would be most welcome. In particular, you can perform a significant service by answering the following simple questions:
   a. Do you think that an expanded nationwide study would be worthwhile?
   b. Have you any suggestions as to how to bound or define such an expanded study; i.e., what industries, how many companies in each industry; what about multiple divisions of large companies; what about geographic distribution, etc.?
   c. The $64 question: Would your Company participate* in an expanded study if one was to be carried out? Please check with your management before you answer this, as your answer may be used as a basis for a future effort.
5. I hope you find the results as provocative as those of us who participated in the effort did, and that you take the time to share your comments with us.

Very truly yours,

Albert J. Morris
President, Genesys Systems, Inc.

* Please note that in an expanded study, we would simplify the Individual Engineer's Questionnaire; we would eliminate the First or Earliest Supervisor's Questionnaire, and maybe also the Chief Engineer's Questionnaire.

AJM:cja

THE RETURN ON INVESTMENT IN CONTINUING EDUCATION OF ENGINEERS

PRINCIPAL INVESTIGATOR: Albert J. Morris, President
Genesys Systems, Inc.

Principal Consultants: Peter Sherrill, Research Consultant

Michael Scriven, Director
Evaluation and Development Group

Steering Committee Members:

Representing Industry
Donald L. Hammond
Director of Physical Electronics, Hewlett-Packard

Representing Special Interest Groups
James F. Gibbons
Prof. E. E., Stanford University —
Representing National Acad. Eng.
Eugene J. Sullivan
Associate Director, Office of Educ. Credit, American
Council on Education — Representing ACE
John Enell
Vice President Research, American Management
Assoc. — Representing AMA

Representing Universities
Jack Munushian
Prof. of E. E. and Director, ITV Network,
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Dean of Engineering, Colorado State University
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Associate Dean of Engineering,
Georgia Institute of Technology

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Representing IEEE
Joseph M. Biedenbach
Director Continuing Education,
Univ. South Carolina — Representing ASEE
Howard W. Butler
Prof. Mech. Eng., West Virginia University —
Representing ASME

Representing Government
John E. Leveen
Employee Development Officer,
NASA/AMES — Representing NASA
Herbert B. Rosenstock
Senior Scientist, Navy Research Laboratory —
Representing Navy
Eric A. Eber
Director of Education, Army Educ. Ctr., Ft. Belvoir —
Representing Army

Other Consultants:

Consultants
Gene W. Dalton
Prof. Organizational Behavior,
Brigham Young University
Paul H. Thompson
Assoc. Prof. Organizational Behavior
Brigham Young University
Anthony L. Malo
Asst. Director, Center for Leadership Studies,
Univ. Santa Clara
Peter N. Sherrill
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William R. Kincheloe
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Kenneth S. Down
Director, ITV Network, Stanford University
Michael Scriven
Prof. U. C. Berkeley, Director, Evaluation and
Development Group

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JUNE, 1978

FOREWORD

The publications committee of the Continuing Professional Development Division of the American Society for Engineering Education is dedicated to publishing documents, monographs and conference proceedings of interest to adult educators in business, industry, government, and education in the field of continuing education of engineers.

This Study, printed in its entirety here, is the first study of its kind attempting to determine if a correlation exists between participation in continuing engineering education programs and an individual's return on investment for that participation. We hope that publishing the results of this initial Study will stimulate more research in this area and result in constructive dialogue between continuing education directors in business, industry, government and education with the practicing engineer. If this results, the publications committee of the CPD Division of ASEE will consider their efforts in this endeavor to be worthwhile.

For the Committee
J. M. Biedenbach, Chairman

ABSTRACT

To investigate the "Return on Investment in Continuing Education of Engineers", a pilot study was performed aimed at determining the relationship between measurable performance of engineers on the job and participation in continuing education (CE). Positive relationships between CE and job performance have been shown for engineers within each participating organization and for all engineers in these organizations combined, and these relationships have survived analytical attempts to attribute them to other causes.

It was expected that "inherent ability" and the willingness to work agressively and diligently and spend extra hours when required (DRIVE) were attributes which would most likely be the best predictors of performance and that, by comparison, the effects of CE would be small--if measurable at all. The results, however, appear otherwise. It would seem that CE participation, particularly in other than regular academic university courses, is the dominant predictor of performance, while inherent ability and DRIVE seem less important.

Participation in technical, business and other CE are shown to be positively related to growth in compensation and participation in business CE is shown to be positively related to growth in supervisory responsibility. DRIVE is the characteristic most strongly related to the ratings of Chief Engineers. Job challenge is consistently negatively related to participation in CE and to academic attainment and DRIVE. Participation in CE seems to result in strong positive attitudes by the participants in most areas.

Participation in non-credit technical CE (other than regular academic university courses) is shown to be more related to compensation performance than participation in technical courses for university credit. Also, participants in technical CE away from employer's location and with non-academic related instructors seem to do better, when measured by compensation gain, than participants in in-house courses or participation with academic-related instructors. The relative strength of these relationships may result from the much larger level of effort reported in non-credit technical CE taught by non-academic instructors away from the place of employment.

The results seem to indicate that the effects of CE participation may be cumulative over time. The findings also suggest that "mental stimulation" provided by exposure even to non-job-related courses, may be an important factor.

Perhaps the most compelling aspect of the findings are their consistency across time intervals, organizations, ability groups and situations. These patterns of consistency in the results strongly support the reliability of the relationships discovered. The Study results rest as much on these data patterns as they do on the absolute strength of correlations.

While the above results are based on a pilot group, and while they cannot be generalized to all engineers everywhere, they clearly show that CE can affect job performance and that its effect can be more significant than other parameters such as ability and DRIVE.

ACKNOWLEDGEMENTS

The help and support of the Steering Committee and Consultants over a prolonged period of time has been an essential factor in the successful completion of the Study. However, the services of one person have been absolutely vital and unstinting and deserving of special mention. Peter Sherrill is responsible for the basic Study Design and for providing all of the necessary expertise in the social science research and statistical analysis area without which the Study could not have proceeded to its present conclusion. In addition, Michael Scriven has contributed significantly with his ideas and with his insight and--in effect--by providing a preview of how the Study results might be evaluated by others. Special mention must also be made of J.Q. Johnson of Stanford University who, by his expertise with available statistical computer programs and his cooperative attitude, produced the voluminous analyses on which the Study results are based.

Very special thanks are due to the people who participated in the Study, either as individual engineers, Chief Engineers, Supervisors or in Personnel Departments. Their participation would not have been possible without the foresight of the management people in each organization, including: Jack Keyes (formerly Vice-President and General Manager at Ford Aerospace and Communications), Don Kiser (Vice-President and General Manager of GTE-Sylvania), Frank Jarrett (Director of Research and Development at FMC), and Clarence Syvertson (Deputy Director of NASA-Ames). I am pleased to state that their faith in the Study has been well rewarded.

Finally, I wish to express my appreciation to the Board of Directors of Genesys Systems, Inc. for recognizing the need for the Study and to my associates for their assistance and for bearing with me through the trials and tribulations of getting the job done. In particular, the help of Bruce Fielding, Jr. was invaluable.

Albert J. Morris
Principal Investigator

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EXECUTIVE SUMMARY

"THE RETURN ON INVESTMENT IN CONTINUING EDUCATION OF ENGINEERS"

To investigate the "Return on Investment in Continuing Education of Engineers", a pilot Study was performed aimed at determining the relationship between measurable performance of engineers on-the-job and participation in continuing education (CE). Results have been obtained which are more significant than initially contemplated. Positive relationships between CE and job performance, (as measured by growth in compensation and growth in supervisory responsibility), have been shown for engineers within each participating organization and for all engineers in these organizations combined, and these relationships have survived analytical attempts to attribute them to other causes.

When the Study was initiated, it was expected that "inherent ability" and the willingness to work aggressively and diligently and spend extra hours when required (DRIVE) were attributes which would most likely be the best predictors of performance, and that, by comparison, the effects of CE would be small--if measurable at all. The results, however, appear otherwise. It would seem that CE participation, particularly in other than regular academic university courses, is the dominant predictor of performance, while inherent ability and DRIVE seem less important. The effects of CE on performance have been shown to be largely independent of ability, as they persist within groups of different ability levels. This outcome was unexpected and might alter some concepts of the value of CE in the overall spectrum of education.

Perhaps the most compelling aspect of the findings are their consistency across time intervals, organizations, ability groups and situations.

These patterns of consistency in the results strongly support the reliability of the relationships discovered. The Study results rest as much on these data patterns as they do on the absolute strength of correlations.

STUDY APPROACH

In its approach to the data, the Study used archival records that were maintained by both employers and employees to document measures of performance and measures of participation in CE. It was believed that availability of such data would be a less expensive and more expeditious way to answer the fundamental question than undertaking a longitudinal study over time with controlled groups of individuals. Further, it was considered essential that the Study results be "measurable" in terms of objective data, i.e., opinions or attitudinal responses would not by themselves be convincing. Also, to be believed, the Study results were required to be clear and strong without elaboration of statistical techniques to demonstrate meaningful results.

While a large number of variables were measured and used in the analyses, only a few determine the basic relationships, i.e., the number of hours of continuing education (technical, business/management or other) and the performance variables which are basically compensation and supervisory responsibility. All other variables were utilized only to determine causal relationships or to derive additional information to add to the total results. In addition, sample sizes used to determine relationships of fundamental interest were always large enough to enable statistically significant findings.

STUDY PARTICIPANTS

Three hundred and ninety-six individual engineers employed at NASA/Ames Laboratory (government space research), Ford Aerospace and Communications (aerospace-communications), FMC (machinery) and GTE Sylvania (defense electronics) participated in the Study, along with their Chief Engineers, their Present Supervisors, their First (or earliest) Supervisors and the Personnel Department of each organization. While the organizations represent diverse activities, all of the participants were located in the San Francisco Bay Area. Of the total engineering population in these organizations, 14% (533) individuals volunteered to participate and 72% (396) of these provided data.

The volunteer sample obviously contains self-selection bias. Most of those engineers who chose not to participate were either unwilling or unable to take the time required; a few did not believe in the Study. Thus, there is no way of knowing whether the 396 participants are representative of all engineers in their own organizations, or of engineers in other disciplines, or in other geographic areas. However, the data received from each organization are broadly distributed and the patterns of the distributions are very similar. This is true also for FMC, where a higher percentage of engineers participated and the self-selection bias is less. Based on demographic distributions, it is difficult to argue that the response group has any special or unique characteristics which would bias the Study. Nevertheless, an enlarged Study covering other engineering disciplines and other geographic areas would be needed to resolve the question of bias.

ROI TO INDIVIDUAL ONLY TO BE DETERMINED

"Return on Investment" could relate to "return" to the individual or "return" to the employer. The Study has concentrated on direct measures of return to the individual rather than to the employer because a positive return to the individual, based on "on-the-job" performance, should imply a positive return to the employer as well. Further, exploring data relative to employers was beyond the scope of the Study.

VARIABLES

It was considered essential that all participants be compared to each other at equivalent points in time. The reference point in time, TEMPLY, is the date of first full-time employment after leaving school as a full-time student. Each individual was then examined 3, 6, 9, 12, 15, and 18 years after this date, to the extent that the individual was represented in the data sample for that period. Primary measures of performance were compensation and supervisory responsibility. Compensation was measured both in absolute dollars (normalized by the annual consumer price index) and by relative compensation (% increase each year relative to one's peers). Responsibility was measured by the number of persons supervised, as distinguished from level of technical responsibility. Other secondary but still objective measures of performance were the number of papers published and the number of patents issued.

The outcome variables were examined as a function of total CE, technical CE, business CE and other CE. Further, to eliminate the effects of ability, DRIVE and other personality characteristics, analyses were performed within ability groups and various mediating variables were controlled to determine the contribution of each. The important mediating variables taken as proxy measures of inherent ability included various academic-related measures as well as evaluations of Chief Engineers and Supervisors.

NATURE OF REPORT

This Report consists of five replicated analyses. It covers engineers in each of four organizations separately and all engineers combined. The results between organizations reflect some organizational differences. However, the consistency of the individual trends, together with the results for all engineers combined, tend to diminish the importance of these differences. But, the differences between organizations suggest caution in generalizing results to all engineering disciplines. The results are valid for the group surveyed.

STUDY RESULTS

A. Relative To Participation in Technical Continuing Education

1. The data show that growth in compensation is positively and independently related to participation in technical CE.
2. The data show that participation in technical CE is negatively but weakly correlated with supervisory growth.
3. The data show that participation in technical CE is positively related to publishing of papers but only in organizations where such activity is important.
4. The data show only weak and not dependable relationships between participation in technical CE and awarding of patents.
5. The data do not show a relationship between participation in technical CE and a change in the Chief Engineer's ratings.
6. The data show that technical job challenge, as perceived by individual engineers, is negatively but weakly related to participation in technical CE.
7. The data show that participation in non-credit technical CE (other than regular academic university courses) is more related to compensation performance than participation in technical courses for university credit. This result may be an artifact due to the significantly greater participation in non-credit

technical CE than in credit technical CE in all organizations, in all years. Also, participants in technical CE away from employer's location and with non-academic related instructors seem to do better, when measured by compensation gain, than those taking in-house courses or with academic-related instructors. However, it is not possible to conclude from these results that credit technical courses are not as good as non-credit technical courses, or that in-house technical courses are not as good as technical courses away from work or that academicians are not good instructors. It is possible to conclude:

a. Non-credit technical CE is measurably effective in leading to increased compensation.

b. For the sample group studied, non-credit technical CE was significantly more effective than credit technical CE.

c. Non-academic instructors are capable of doing an effective job of teaching.

d. Non-credit technical CE courses offered away from the place of employment can successfully impact on performance.

B. Relative to Participation in Business/Management Continuing Education

1. The data show that growth in compensation is positively related to participation in business CE, but not as strongly related as technical CE.
2. The data show that growth in supervisory responsibility is positively related to participation in business CE.
3. The data show no useful relationships between participation in business CE and publications and patents.

4. The data show weak positive relationships between participation in business CE and the Chief Engineer's ratings.

5. The data show that management job challenge, as perceived by individual engineers, is consistently negatively related to participation in business CE. The negative relationships are stronger than those between technical CE and technical job challenge.

C. Relative to Participation in Other Continuing Education

1. The data show that growth in compensation is positively related to participation in other CE, but this relationship is much weaker than those shown by technical and business CE.

2. The data do not show useful relationships with any other outcome variables.

D. Relative to Inherent Ability and DRIVE Variables

1. The data show that academic attainment is not useful as a predictor of growth in supervisory responsibility or of growth in compensation or of the ratings of the Chief Engineers.

2. The data show that DRIVE is relatively unimportant in determining growth in compensation. It is positively, but not as strongly as business CE, related to growth in supervisory responsibility, but it is, understandably, the strongest positive contributor to the ratings of Chief Engineers.

3. The data show that academic attainment and DRIVE are consistently negatively related to job challenge.

4. The data show that DRIVE and inherent ability variables, taken together, do not seem as important in determining compensation as participation in CE. This finding is more strongly supported by the Study results than expected. Specifically, academic

achievement, (presumed here to be one measure of inherent ability), represented by gradepoint average and academic honors, advanced degrees and the quality of school attended, seems to make less contribution to performance than CE participation, except in isolated cases.

E. Relative to Timing of Attaining the M.S. Degree

1. The data show that engineers who received the M.S. degree while fully employed exhibit interesting differences from engineers who received the M.S. as full-time students: they show stronger positive relationships between business CE and compensation and between technical CE and relative compensation; but no relationship between other CE and compensation. Interestingly, however, engineers who received the M.S. degree as full-time students do show a positive relationship between other CE and compensation.

F. Attitudinal Responses

1. Along with objective measures of performance, attitudinal responses were elicited from participants with respect to their CE experience. The results are largely positive. In relation to their opinion on the effects of continuing education: 91% reported positively on job performance; 71% reported positively on job assignments; 63% reported positively on prospects for advancement; 80% reported positively on how they feel about themselves; 85% reported positively on their intellectual perspective; 63% reported positively about relationships with fellow workers; and 51% reported positively on their feelings about their employer. However, 12% reported negative feelings about their employers as an outcome of their CE experience.

2. Seventy-nine percent of the participants noted that--in their opinion--50% or more of their CE effort had "job-related" value. Eighty-four percent believed that 50% or more of their CE had "mental stimulation" value. Reflecting these opinions, over 40% of the respondents would establish policies which would provide support for CE participation in which up to 50% had non-job-related content.

SUMMARY AND CONCLUSIONS

A. Summary

1. Participation in technical, business and other CE positively affects growth in compensation.
2. Participation in business CE positively affects growth in supervisory responsibility.
3. DRIVE is the characteristic most strongly related to the ratings of Chief Engineers.
4. Participation in CE is more important as a predictor of job performance than the combination of DRIVE with all of the inherent ability variables utilized in the Study.
5. Job challenge is consistently negatively related to participation in CE, academic attainment and DRIVE.
6. Participation in non-credit technical CE, with non-academic instructors, away from the place of employment is more important in determining compensation growth than participation in regular academic technical university courses, or with academic instructors, or in courses offered in-house.
7. Engineers who obtain their M.S. degree while fully employed show stronger effects of participation in CE than those who

receive their M.S. degree as a full-time student.

8. Participation in CE seems to result is strong positive attitudes by the participants in most areas.

B. Conclusions

1. While the above results are based on a relatively small pilot group, and while they cannot be generalized to all engineers everywhere, the results clearly show that CE can affect performance and that its effect can be more significant than other parameters such as ability and DRIVE.

2. The stronger relationships demonstrated between technical CE and compensation, as compared to the effects of business and other CE, may relate to the far greater level of effort in technical CE reported by most engineers. Part of the evidence for this may be the much stronger effects exhibited by non-credit technical CE as compared to credit technical CE, where the disparity between levels of participation are also large. Also, engineers in organizations reporting higher levels of CE participation tend to show stronger related gains in performance. Finally, engineers who receive their M.S. degrees while fully employed show higher levels of CE participation, which coincides with stronger relationships shown with performance.

3. The results seem to indicate that the effects of CE participation may be cumulative over time. This may explain why engineers who participate in CE only rarely and sporadically may find that the expected benefits of such participation are illusory.

4. The findings also suggest that "mental stimulation", provided by exposure even to non-job-related courses, may be an important factor. If so, organizational policies for CE support, which require the CE to be job-related, might be worthy of review. This view is further supported by the attitudes of the engineers surveyed about what policies they would establish in support of CE.
5. A significant percentage (12%) of the engineers surveyed expressed negative feelings about their employers as a result of their CE participation--and there is no indication of why this should be, as all of the employers support CE with comparable policies intended to obtain improved performance and employee morale. This response could relate to lack of job challenge or policies requiring CE to be job-related for support to be provided; or it could be something else.
6. It was expected that the measurable effects of CE--if any--would be small compared to the effects of ability and DRIVE. While the reverse has been shown to be the case, it is possible that the variables used as surrogates for inherent ability did not completely represent all of the important attributes. For example, there are other ability, personality and even environmental measures which might have been used but which were not incorporated in the Study. However, until it can be demonstrated otherwise, it is believed that the proxy measures used would have revealed a lack of causal connection with CE--if such connection were not really there.
7. The positive relationships between technical CE and compensation and between business CE and supervisory responsibility are

supportive of the concept of bifurcation of career paths. Some engineers concentrate on technical excellence, leading to increased technical responsibility and compensation; others move into a management path, where the reward system is more related to business/management expertise and supervisory responsibility.

8. The negative relationships exhibited between job challenge and participation in CE, academic attainment and DRIVE may relate to "increased expectations" on the part of the individual engineers relative to the jobs they feel they should be asked to perform. There is a limit in any organization in being able to provide for truly challenging job assignments.
9. Organizational policies which require all CE to be job related for support are at odds with how many engineers perceive the effects of CE, with policies that the engineers themselves might establish and with the positive effects of other CE which have been shown.
10. Assuming that the positive relationships shown between participation in CE and job performance are valid, which is the cause and which is the effect? One can, for example, hypothesize that high performers are the people who chose to participate in CE. However, while this Study has not proved causation, it has established associations between CE and subsequent performance which have been demonstrated not to be false associations created by any other variable which the Study could measure. Since associations persist after adjustments for all threats to the causal relationship, one can accept the relationship as not false until someone produces an alternative explanation

which can be measured and tested. In addition, there are several specific relationships which lead one to believe that it is CE participation which is the true cause. For example, there is the positive relationship shown between technical CE (but not business or other CE) and publication of papers; there is the positive relationship shown between business CE (but not technical or other CE) and supervisory responsibility and there is the strongest positive relationship shown between technical CE and compensation--a relationship which can only be attributed to increased technical responsibility related to better technical performance.

THE RETURN ON INVESTMENT IN CONTINUING EDUCATION OF ENGINEERS

I - INTRODUCTION

This Pilot Study was designed to determine "The Return on Investment in Continuing Education of Engineers." The primary purpose of the Study, stated simply, was to ascertain whether participation in continuing education (CE) by engineers makes any difference in a measurable way, i.e., does it affect their on-the-job performance. Since CE is costly both in time and money, it represents an investment. For there to be a return on this investment something positive must occur, hopefully measurable in relation to performance.

In the United States, billions of dollars are spent annually in support of CE. This huge investment is made every year primarily because most employers and most people have faith that this educational effort is worthwhile. After all, they are told that the degree oriented education system brings increasing rewards with higher levels of academic attainment, why not also CE? Nevertheless, there has been little evidence to prove the efficacy of CE and what has been reported is contradictory. For example, Klus and Jones (1) report positively on the effects of CE on salary and job satisfaction and give data to support this. Unfortunately, no attempt was made to determine true causal relationships. This resulted in "positive signals" but no real proof. Dalton and Thompson (2) report on attempts to correlate performance rankings with courses taken in the preceding three years and found no relationships. In a later paper (3), Thompson, Dalton and Kopelman state "since both the level and timing of education seem important in maintaining technical competence, why does the number of courses taken on a continuing basis, either in-house or at a local university, appear unrelated to performance?"

Klus (4) states: "No published statistical studies have been found which demonstrate to industry that possible end results of continuing education are increased productivity and/or quality, and ultimately increased profits." If this statement is accepted, and with the enormous interest and involvement in CE worldwide, it appeared reasonable to attempt to try to relate CE with performance in a definitive way. The question was how?

The Study was predicated on an unusual - but high risk concept; high risk in the sense that it was not known if the hypotheses on which it was predicated would produce useful results. Specifically, rather than undertake a very costly long-term longitudinal study with its attendant control difficulties, why not try to obtain answers based on data which might already be available? For example, employers keep

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1. Klus, John P. and Jones, Judy A. - "Engineers Involved in Continuing Education - A Survey Analysis, "ASEE Publication, 1975
2. Dalton, Gene W. and Thompson, Paul H. - "Accelerating Obsolescence of Older Engineers, Harvard Business Review, Sept-Oct. 1971
3. Thompson, Paul, Dalton, Gene and Kopelman, Richard - "But What Have You Done For Me Lately - The Boss," IEEE Spectrum, Oct. 1974
4. Klus, John P. - "Establishing The Case For Continuing Education For Engineers," June 1974, Report Prepared for the Int. Working Group on CE for Engineers of UNESCO

long-term records on compensation, performance ratings and other key personnel data. Also, engineers work in large numbers for large employers and they already have a history of participation in CE programs. Furthermore, many engineers keep personal records of their levels and kinds of CE participation and they can usually also recall the number of people who reported to them at different points in time. Therefore, the data base needed to relate CE to performance might already exist. Since there was no way to ascertain this with confidence in advance, a small scale Pilot Study, restricted to participants from only four organizations, was initiated.

It was decided to undertake a study utilizing archival data and attempt to document an historical record of CE participation vs a number of measurable outcomes based on objective data, such as compensation, supervisory responsibility, number of papers published and number of patents applied for. In addition, the Study measured the relative effects of Credit vs Non-Credit CE, CE participation At-Employers vs Not-At-Employers location and CE offered by Academic Instructors vs Non-Academic Instructors. To obtain the required data would clearly impose a significant burden on participants. Therefore, though involving a small extra effort, a number of attitudinal questions were added which were hoped would produce information on relationships with Chief Engineer's rankings, with attitudes toward technical and management job challenge, and on each engineer's personal attitudes toward his CE experiences.

The Study was concerned with relating CE participation to performance. Performance can be measured in two ways: job performance by the individual or, organizational performance by the employer. It was decided to limit the scope of the Study only to determining the effect on individual job performance for several reasons. The data determining job performance of individuals are totally different than those required to determine the performance of employers. Further, a sample of engineers employed at a few local organizations could provide the data needed for individuals, whereas a nationwide endeavor would be required to obtain a large enough sample of employers. In addition, it is believed that employers reward employee job performance primarily by added compensation and responsibility and that employer performance is closely related to employee job performance. Therefore, if employee job performance is related to CE participation, it can at least be reasonably inferred that employer performance would show a similar correlation.

Personnel from four organizations located in the San Francisco Bay Area, all large employers of engineers participated in the Study. Included are Ford Aerospace and Communications (aerospace communications), NASA-Ames (government space and aerodynamics research laboratory), GTE-Sylvania (defense electronics) and FMC (machinery). In each organization, data were supplied by individual engineers, by their current and first or earliest supervisors, by their Chief Engineers and by the Personnel Department. What follows is an analysis of the data obtained from the participants. In effect, there are five reports which follow, not just one. Each organization is different and the results on each differ in interesting ways. Therefore, the results for each organization are reported separately but they are also reported as a combined group.

II - STUDY DESIGN

1. Philosophy - The Study attempted to examine, based primarily on objective data, if there is a relationship between participation in CE and job performance. The Study was constrained to look retrospectively primarily at archival data on past

performance of engineers. Therefore, the project was limited in terms of what data were recoverable. While the research aspired to study the benefits of CE to engineers, there were many difficulties. It was understood that any compelling causal inference on whether or not CE is responsible for certain benefits would be difficult to tease from available post-factum data. The reasons for this severe problem, common to most real-time behavioral research, are due to three pervasive difficulties: ethical, logical/conceptual, and technical.

Ethical Difficulty: The first difficulty is that the research could not randomly assign engineers to varying conditions of CE; that is, the decision either to take CE or not lies with the engineer and not with the research project. This self-selection could very well be related to antecedent personal attributes of the engineer (e.g., energy, habituation, natural intelligence, aspirational drives, etc.) which are also held to be attributes of career success, quite independent of CE. In this light, the project had no control at all over the experimental conditions that it would otherwise like to have.

Logical/Conceptual Difficulty: The second difficulty, in part related to the first, arose because there were no direct ways to determine the degree to which a given engineer might possess certain key innate abilities, such as energy, motivation, drive, responsibility, intelligence, ambition, etc., in order to permit control for individual personal differences between engineers in the Study design. In addition to "self-selection" variables, however, any complex social process --- such as the impact of CE --- must be viewed as the result of many factors acting in concert. In such a situation, any of the factors could also account for, or mediate, or influence the outcome. For example, it could be argued that prior education alone, or health, or family background or other variables might explain different rates of advancement, independently of CE. However, the difference between such mediating factors and factors related to self-selection is that the former can be ascertained, if anticipated, while the latter can only be measured and inferred indirectly, if ascertained at all.

Technical Difficulty: The third difficulty constrained the analytical techniques available. For example, multivariate statistical approaches and tests which are typically used to deal with complex data depend upon adequate replication (sample, sub-sample sizes) and other assumptions including linearity, in the measurement of variables. And it would be inappropriate to impute linearity or other characteristics to data simply because it is convenient to do so. In the case of CE, key variables cannot be expected to be free of extreme variation and non-symmetrical distributions. While in these cases normalizing transformations are frequently permissible, they cannot compensate for ad hoc scales used in data collection on the measures. In addition, much of the work on causal inference in social settings rests to some extent upon the use of the correlation coefficient (Pearson-r). It is important, therefore, to acknowledge the peculiar sensitivity of this statistical measure to violations of elementary symmetry, which are difficult to achieve in the measurement scales used.

There are other assumptions that underlie most statistical approaches that were open to this Study. For example, multiple regression and the analysis of variance assume homogeniety of variance, which when grossly violated may allow some subtle relationships to escape detection. However, slender effects and subtle outcomes --- which may be statistically significant (i.e., "real) but slight --- would probably leave the impact of CE in continued doubt. In light of the technical difficulties, it was believed that the analysis should attempt to demonstrate manifestly clear, logical and well defined relationships rather than depend too greatly upon the sophistication of analytical technique, tests of "significance" or extreme "signal-to-noise" reassurances.

2. General Conceptual Framework - This research proposed to study the benefit to or the return on investment (ROI) in continuing education of engineers. The meaning of ROI is limited here. In the case of the individual engineer, an "investment" is seen as his effort, out-of-pocket cost and time; and his return is seen as improved job performance which might lead to improved compensation, supervisory responsibility or improved stature and self-esteem.

3. Design Orientation - The research was conducted on an historical basis. Individual factual histories were examined from archival records to the greatest possible extent. These records were necessarily, however, supplemented by factual recall reports from the individual engineers, particularly in cases where data were not available from normal records. The factual data from archival records were complemented by personal impressions and perceptions of Chief Engineers and Supervisors, with the aim of attempting to get additional measurements of "inherent individual ability." Thus, the design would be technically described as a post-factum design using factual data from archival records where possible.

4. Pre-Test - In order to test questionnaires, administrative protocol, contact procedures and develop analytical software, pre-testing was done with the cooperation of Hewlett-Packard and Ford. Ten individual engineers in both organizations participated along with various Supervisors, Chief Engineers and the Personnel Departments. The final Study protocol incorporated feedback from the pre-test results.

5. Definitions - Definitions of what is meant by "engineer," what qualifies as CE, and who qualifies as a Current Supervisor as well as a First or Earliest Supervisor are shown in Appendix 1A.

6. Variables* - The final Variables List which was utilized is shown on Appendix 1B. The Questionnaires (Appendix 2) list many other variables. Unfortunately, the amount of data returned was so large and the analysis problem so complex that only first order results can be presented here. For convenience, the Variable List is reproduced on the front cover of this Report. The variables are broken down as follows:

A. PRIMARY OUTCOME VARIABLES - OAC, ORC, OSP - These variables representing compensation (OAC, ORC) and number of persons supervised (OSP) are based on objective archival data. The compensation variables are based on actual organizational records and the information is derived from the Personnel Department Questionnaire (Appendix 2B). The values for OSP, which is used as a proxy for responsibility, are derived from the records or the memories of the individual engineers and are obtained from the Individual's Questionnaire (Appendix 2A). As such, they are prone to error, but they are not based on opinion.

In the case of compensation, normalization of all salary data by the consumer price index to a common year is done to eliminate effects of inflation. The result is OAC (absolute compensation). In addition, it was desirable to try to eliminate differences in starting salaries and differences in compensation patterns between organizations. To do this a new compensation variable,

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* The values of all variables which change with time and which are tabulated in any period represents the cumulative total for that year and all prior years included in the time span covered.

ORC (relative compensation index), was designed as a normalized measure of compensation performance (percentage increase in salary each year relative to the average percentage increase of the entire group) of each individual relative to his peers in his own organization for each year. This variable is defined in Appendix 1B.

Responsibility (OSP) is measured by the number of persons supervised by an engineer in a given year, where the number of people supervised includes all people responsible to the engineer, not just those reporting directly to him.

B. SECONDARY OUTCOME VARIABLES - OPT, OPB, OCR, OCT, OCM - OPT and OPB, representing number of patents applied for and number of papers published yearly are based on objective data from individual engineers.

OCR (Chief Engineers rating) is based on the Chief Engineer's Questionnaire (Appendix 2C). It is an opinion variable which is viewed both as a performance outcome and as a measure of inherent ability. The Chief Engineers were asked to rank their engineers in the order of their value to the organization, based on past performance and future potential rather than salary or position. Specifically, they were asked not to consider that some had certain skills and others did not. The ranking is based on total capability of each individual, not necessarily detailed needs in manning a department or division.

OCT (technical job challenge) and OCM (management job challenge) are opinion type outcome variables derived from annualized individual engineers data.

C. ATTITUDINAL OUTCOME VARIABLES - OAJA, OAJP, OAFW, OAPA, OAFY, OAIP, OAFE, CEAJR, CEAIS, POLICY - Data on these variables are derived from the individual engineers. While these data represent opinions and are not objective data, nevertheless they are important indicators of how individuals perceive the results of their participation in continuing education. Included are variables measuring attitudes about: OAJA (job assignment), OAJP (job performance), OAFW (relationship with peers), OAPA (prospects for advancement), OAFY (feelings about oneself), OAIP (intellectual perspective) and OAFE (feelings about employer). Also included are variables reflecting attitudes on the job-related value of CE (CEAJR) and the stimulation value of CE (CEAIS) as well as each engineer's opinion on what % of CE should be job-related (POLICY).

D. CONTINUING EDUCATION VARIABLES - CETOT, CETECH, CEBUS, CEOTH - The independent variables against which performance was measured include CETOT (total CE hours), CETECH (technical CE hours), CEBUS (business/management CE hours) and CEOTH (other CE hours). They are all based on objective data from individual engineers. Assuming that correlation is shown between CE and job performance, it is also desirable to distinguish between the effects of Credit vs. Non-Credit courses, Academic vs. Non-Academic instruction and the location of the instruction. Objective data on these were also provided by the individual engineers. All of these variables are subject to error as they rely on the accuracy of individual records and memories.

E. ABILITY VARIABLES - IPR, IFR, OCR, IGPA, ISCH, ISH, Ph.D, MS, DRIVE - IGPA (Gradepoint Average), ISH (Scholastic Honors), ISCH (Quality of School), Ph.D (Doctors Degree), MS (Masters Degree) are academic related variables based on objective data from individual engineers. These data are not likely to contain many errors because of their nature. While these variables measure primarily academic ability, they are clearly a proxy for some combination of intelligence, math and science aptitude and the ability to apply oneself to study.

The quality of the School (ISCH) was determined by the ranking of the quality of the faculty of different departments in engineering - a ranking done by faculty members of various engineering schools.

The Chief Engineers ranking (OCR) has already been discussed. This is considered to be a measure of inherent ability as well as an outcome. The other ability measures used were IPR (Present Supervisors rating) and IFR (First or Earliest Supervisors rating). These ratings were derived from a Questionnaire (Appendix 2D) which is essentially identical for both types of supervisors. All of these measures are based on opinion.

Note that the Supervisors' questions are aimed at evaluating "inherent ability" in a sense much larger than intelligence alone or math ability alone. It is heavily oriented towards overall ability to get a job done. Further, each question was weighted after the fact as shown on the Questionnaire. This judgmental weighting was deemed essential. For example, the ability to get a job done in the best way, at least cost, is clearly more important in relation to performance than being adaptable and patient. Each of the 37 questions on the Supervisors' Questionnaire was further weighted statistically in order to emphasize differences and the results of all questions were then summed to produce a single normalized number representing the Supervisors' rating, with 1 being the lowest and 10 the highest rating.

DRIVE is a personality variable which is a linear combination of the responses to question 2v and 2w on the Current Supervisors' Questionnaire. It measures an individual's ability to work aggressively and diligently and his willingness to spend extra hours when required. This variable and inherent ability are two of the first things most people would normally think of if they were asked to name characteristics which are predictors of performance or success.

What about other ability variables? I.Q. as a measure was discarded for several reasons. There were questions of its value and of the availability of the information and concern about peoples willingness to disclose the information, even if known. A number of other personality related type variables are already incorporated into the Supervisors' Questionnaires. In essence, it was concluded that if the results could survive the causal relationships with performance inherent in the ability variables chosen, then they could probably survive most other variables likely to be considered as "threats" to any relationships with CE that might be found.

In the original study design it was anticipated that inherent ability would be a very strong predictor of performance and that the relationship between performance and CE would be very much weaker, i.e., the study would be looking for a very small signal (CE effect) in the presence of a large amount of noise (ability) effect. For this reason, an attempt was made to derive a single ability variable, utilizing multiple regression techniques, which combined IGPA, ISH, ISCH, IPR, IFR, MS and Ph.D. It was found that, for each of the time periods analyzed, the regressions were significantly different from one another and that no single predictor for ability made sense for the sample group. For this reason, separate accounting for the effects of all of the ability variables has been maintained.

F. OTHER VARIABLES - TEMPLY - Because the Study relies on historical data, all individuals employed for less than 3 years were not included in the Study. Data were requested for as far back as 15 years, a time scale which imposed problems with data availability and accuracy. All time related data are referred back to TEMPLY (the year of first full time employment after receipt of last degree as a full-time student). Therefore, all individuals are compared to each other at identical time periods since graduation. By this normalization, comparing young people with older and more senior people is avoided. However, this approach means that data are missing at both ends of the time period surveyed. For example, data are used only for the time periods 3, 6, 9, 12, 15 and 18 years after TEMPLY. The young individual who has worked for only 7 years shows up in the data for years 3 and 6 only. The older individual, who started to work 10 years prior to 1960 (15 years back from 1975), will only show up in the data for years 12, 15 and 18. Therefore, each time period has a unique set of data, but data for prior and later periods may or may not include some of the same people.

Data analysis was performed using SPSS* software and consisted of the following elements (see Appendix 23 as a guide):

7. Statistical Analysis

A. SETTING OUT PROPOSED RELATIONSHIPS -

Given that most of the variables of interest have been defined and exist in file, the general design proceeded by considering relationships among these variables, over time. In the initial analysis, a variety of simple correlations between one variable and another were computed; i.e., between CETECH (amount of technical CE) and OAC (compensation). Obviously, such findings require addressing the question of cause; and no causal connection can be supported except by logical, plausible assertion.

In approaching "causal connections", the strategy of this Study rested on the notion of rival hypotheses. This tradition was first enunicated by T. C. Chamberlin in 1898 and incorporated in John R. Platt's notion of "Strong Inference" (Science, 16 October 1964) and the work of Donald T. Campbell, A. H. Yee, and others. The general approach is empirically based and may be summarized as follows:

> "A hypothesis, proposition, or tentatively proposed causal relationship is set out. Then other plausible, rival hypotheses, or alternative explanations are set out. Insofar as possible, all are tested with observable data and the survivor(s) is offered as the most likely hypothesis for acceptance."

The general procedure is described in the following discussion:

In most physical sciences empirical-functional relationships are somewhat easier to specify plausibly, i.e., one presumably has a more direct sense of action vs. reaction, than in the behavioral sciences. While one might advance the proposition that CE causes pay raises, the empirical-functional connections are not clear. Say for example, CE may be neither necessary nor sufficient for pay raises to occur. To demonstrate the validity of the initial assertion, it is necessary to set up rival propositions as counter arguments; for example, motivation and intelligence cause pay raises --- and also cause persons so endowed to take CE courses. The analytical task is to invalidate such rival propositions, by showing, or attempting to show, that even under equal conditions of motivation and intelligence CE still makes a positive difference. The analysis must entertain as many proxy variables for motivation and intelligence as may be found, e.g., gradepoint average. And, even then residual doubt will exist.

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* "Statistical Package for the Social Sciences" (SPSS), Second Edition, NIE, Hull, Jenkins, Steinbrenner & Brent, 1975, McGraw Hill

Thus, logical description of processes that connect one variable with another in some plausible way are taken as semi-formal assertions or hypotheses which must be attacked in different ways. Those hypotheses that seem to hold up best after repeated attempts to falsify them became those which the Study has advanced as its findings in this research.

B. FALSIFYING ALTERNATIVES -

Specifically, what was done was to look at bi-variate relationships for all people in each organization and at each time period (3, 6, 9, 12, 15, 18 years after TEMPLY). Then the people were separated into ability groups (low-mid-high gpa, with and without scholastic honors, by quality of school, with and without an MS Degree, those with Ph.D Degrees, low-mid-high Supervisors' ratings and low-mid-high Chief Engineers' rankings). If the bi-variate correlations survived within groups of the same ability, it was hypothesized that the effects of ability were cancelled out. Bi-variate correlations do not show the true relationships of a multiplicity of variables. To ascertain this multiple regression is required. Two approaches to multiple regression were taken. The first was the hierarchical approach which hypothesized that the outcomes of interest were primarily related to ability and not to CE. It quickly became apparent that this was not the case and so only step-wise multiple regression results are shown. With this approach, each variable effecting outcome is added in its order of importance in determining the total variance. Further, no variables are included in these data which are not, in any single year, statistically significant.

C. INSISTENCE ON CONSISTENCY -

The data for each year are unique. But, since data on the same individual might be present in more than one time period, the data between time periods are not truly independent. However, the data on any given individual are not the same in any two or more time periods. For example, suppose an engineer in year 6 shows 300 hours of CETECH and $15,000 in absolute compensation. If that engineer was in the sample for year 9, there is negligible chance that his salary is still $15,000 and he may or may not have reported more than 300 hours of CETECH. Clearly, a plot of CETECH vs OAC for this individual would show different points in years 3 and 6. The criterion used, which requires a "pattern" of correlation to exist between years, in effect imposes a much more stringent requirement than one which looks for correlation at only one point in time. It requires persistence of correlation and tends to throw out those correlations which might be due to chance. Specifically, each time period has been analyzed separately and the results from different time periods have not been combined improperly.

D. STATISTICAL SIGNIFICANCE -

For the purpose of this Report, significance "s", as shown in the bi-variate relationship Tables, will determine whether a valid correlation exists if two conditions are met: first, the level of significance in any one year must fall between 0.001 and 0.05, the closer to 0.001 the better; (as "s" signifies the probability that the correlation shown is due to chance) second, isolated values of "s" meeting the above criterion in relating two variables will not be counted unless this criterion is met at least for two points in time. This criterion imposes a more stringent requirement on "significance" than the usual statistical test.

E. SAMPLE SIZE -

Sample size is obviously important. In this Study, the only cases where the sample sizes are very small (5-10) are some where the people are broken down into ability groups to test for causal connections. The basic results of this Study rely on data on all people in each organization and on all people combined. For these data, the sample sizes are not small. Furthermore, even where sample sizes are small, only strong correlations result in "significance" and a "pattern" of correlations over time and between ability groups must exist before an inference is drawn. In addition, the inferences drawn from observing a "pattern" of correlations with CE between ability groups are verified by the multiple regression analyses which always use samples of significant size.

F. STRENGTH OF CORRELATIONS -

Each field of investigation has its own range of correlation coefficients. One expects that values of R approaching 1 would be achieved in many measurements in the physical sciences and engineering. However, in the behavioral and biological sciences, values much less than 1 are typical (for example, inherited characteristics such as height ordinarily have correlations between 0.35 and 0.55). In this Study, no claim is made that all possible variables affecting performance are considered. Typical of other variables known to affect performance (but not considered) are health, family background and environment. In addition, errors in measurement are known to exist. This is particularly true of the independent variable (CE hours) where individuals often relied more on memory than on records. Furthermore, the data distributions are skewed and not perfectly normal in distribution which means that the possible value of R_{max} is less than one. Nevertheless, no transformations were applied to the distributions in order to increase the values of R reflected by the data. For these reasons, in describing the correlations calculated, the following descriptors seem appropriate:

R 0.3 (weak correlation)
0.3 R 0.5 (moderate correlation)
0.5 R 0.75 (strong correlation)
R 0.75 (very strong correlation)

Since the basic data are included in this Report, the readers may draw their own conclusions about the "strength" of the correlations.

G. USE OF PEARSON PRODUCT-MOMENT CORRELATION COEFFICIENT -

It has been suggested that the analysis might be improved by not relying so heavily on Pearson's R. This correlation coefficient is designed to measure a linear association between variables which are normally distributed. In many cases, in this Study, the variables do not enjoy a bi-variate normal relationship, even roughly. In a number of the scattergrams there are many points along the horizontal axis corresponding to little or no continuing education. There are also quite divergent points, with large amounts of continuing education and/or performance level. To better handle the evaluation of statistical significance and to give a better measure of association, it might have been preferrable to dichotomize the data and to use different correlation coefficients. However, review of the results makes it seem unlikely that any improvement in the analysis would change the overall conclusions.

H. CAUSAL CONNECTIONS

No statistical study can ever prove causality; it can only establish associations. It is necessary to establish an association between continuing education and performance and to demonstrate that it is not a false association created by any other variable which the Study can measure. It is still possible that some inherent attribute in an employee, call it QUALITY, drives the employee toward more education and better job performance. It could be that continuing education doesn't cause job performance to go up; both simply increase as a result of QUALITY. However, if the Study corrects for all the measurable variables that might substitute for QUALITY, namely, GPA, DRIVE, HONORS, etc. and if the association persists after adjustment for these variables, one can accept the relationship as being causal until someone produces an alternative explanation involving a variable which can be measured and tested.

I. NUMBER OF VARIABLES

A large number of variables are included in the Study, but only very few are basic to its conclusions, i.e., CETECH/CEBUS vs OAC/OSP. By categorization and multiple regression the Study has examined whether any of a multitude of other variables might be creating a false association, and this is very legitimate. It is quite different from the situation of measuring a multitude of variables and then examining whether any are related to any others. In this latter case, a lack of definite direction could lead to unjustified trust in discovered associations, but this is not that situation in this Study.

III - DATA DISTRIBUTION

One of the major concerns in the Study was the possibility of a bias being introduced by not having 100% participation by all engineers in a given organization. Actual participation levels are tabulated in Appendix 3Q. On the average, 14% of all engineers participated. Of those that volunteered, 72% (396/553) actually followed through and provided data. The volunteer sample obviously contains self-selection bias.

The sample group is all located in the San Francisco Bay Area. This introduces a potential geographic bias. Furthermore, the organizations represented are engaged in electronics, machinery and aerospace research - certainly not representative of all engineering fields. This introduces a potential "industry" bias.

Therefore, it is not possible to say, nor is it claimed, that:

a. The engineers who participated are representative of all engineers in their own organizations, or
b. Of all engineers in the same engineering disciplines, or
c. Of all engineers in all engineering disciplines, or
d. Of all engineers in all geographic locations.

An attempt was made to determine the nature of the potential bias in the engineer sample used. Those engineers who chose not to participate were asked to give their reasons. About half didn't want to or were unable to take the time to complete the Questionnaires. Almost half did not give any reason. A few questioned the potential benefit of the Study and there was a scattering of other reasons. However, none of the reasons given related to level of CE participation, or salary, or age, or any of the parameters used in the Study. Therefore, the only thing learned from this is that the sample people were those who were willing to spend the time and who thought there might be some potential benefit. There is no way to determine how this might bias the results.

It can be seen from inspection of the frequency distributions shown in Appendices 3A - 3P that objective data as well as evaluation data are very broadly distributed and in many cases approximate normal distributions. Considerable data were obtained and while there is no way of knowing how the distributions might change if all engineers had participated, the following observations are pertinent:

a. A very broad spectrum of values was obtained for all variables.
b. The distributions of variables obtained within each organization are remarkably similar to those of the other organizations and for all organizations combined.
c. In the case of FMC, where the response rate was 29% (double the average), the distributions of the variables are close to that of the other organizations with much lower response rates.
d. The results shown in the FMC data, correlating CE with Performance, show trends similar to (but in a different way) those of the other organizations.

Because of the above, the Study has not succeeded in arriving at a hypothesis about any special characteristic of the sample group which would affect the Study results. If the data are biased, the bias is not apparent.

The following discusses the data obtained:

1. Degree Distribution - Appendix 3A - The high MS:BS ratio and number of Ph.D.'s in the case of NASA reflects their being a government research laboratory and to a minor extent (1-2 Ph.d's per year) their policy which allows one-year paid sabbaticals for employees in Ph.D. programs. The other organizations show expected MS:BS ratios.

2. Undergraduate GPA (IGPA) - Appendix 3B - This shows a fairly consistent pattern between groups--and the hoped for wide distribution.

3. Honors vs. No Honors (ISH) - Appendix 3C - This shows clear differences between groups. NASA is about equally divided, whereas the others have three times as many people with No Honors as with Honors. Almost 100% responded on this question.

4. Top Schools vs. Lower Schools (ISCH) - Appendix 3C - The ratio of Study participants between Lower Schools and Top Schools is about 3:1 for Ford and FMC, and 2:1 for NASA and Sylvania.

5. M.S. Before TEMPLY vs. M.S. After TEMPLY - Appendix 3C - The ratio of participants who received their M.S. After-TEMPLY vs. Before-TEMPLY is about 2:1

for NASA and Sylvania, essentially the same as the ratio of Lower Schools to Top Schools. This might be expected as the Top Schools usually graduate more M.S. students before they start full-time employment. For Ford, the ratio is 4:1, indicating a strong tendency to hire B.S. graduates who attain M.S. degrees later on. For FMC, the ratio is 1.5:1 which indicates the inverse of the Ford pattern.

6. Chief Engineers Rating (OCR) - Appendix 3D - Data from Chief Engineers proved the most difficult to obtain. By prior agreement, no such data were available from NASA. In the case of Sylvania, of the 83 participating engineers, Chief Engineers' responses (OCR) covered only 36 of them (43%). However, the returns from Chief Engineers at FMC (100%) and Ford (64%) were much better. The data which were received show almost equal populations in all rating levels--certainly not a normal distribution. This is expected, because if each Chief Engineer rated 100 people from 1-100, then exactly equal populations would show in each rating level.

7. Drive - Appendix 3E - Here the distributions are approximately normal and data are available on most participants. The mean of the DRIVE variable is in the 9.1 - 10 range. In all organizations, more people were rated higher than this mean than below it, so the actual means of the distributions are higher than 9:1 - 10.

8. First Supervisor's Rating (IFR) - Appendix 3F - In many cases, the First Supervisors were no longer available and instructions to switch to the "Earliest" Supervisor still present lost something in translation. Significant data are therefore missing from First or Earliest Supervisors. The percentage returns are: Ford (70%), NASA (59%), FMC (95%), Sylvania (87%), All Combined (78%). Nevertheless, the data are well distributed and remarkably consistent in pattern between organizations.

9. Present Supervisor's Rating (IPR) - Appendix 3G - These data are distributed similarly to the IFR data. Information on IPR is in better shape. This is important as DRIVE is derived from the same data. Even here, 19% of the data are missing from Sylvania and only 85% are available overall.

10. Year of First Full-Time Employment (TEMPLY) - Appendix 3H - Note that these dates range from 1933 to 1975 and that the pattern between organizations is quite consistent. Since the objective data provided by individual engineers goes back only to 1960 (15 years) and since all data are referenced to TEMPLY, it means some people will be missing from the various sample years, i.e., in Year 3 after TEMPLY, 45 Ford people are not included because that point in time for them is prior to 1960 and no data are available that far back. Similarly, the four Ford people whose TEMPLY is 1972, do not show up in Years 6, 9, 12, 15, 18 as they haven't worked that long. Because of these phenomena, the population included in each of the sample years changes from year to year. TEMPLY is the critical time reference; without knowing TEMPLY for each engineer all other data become meaningless as the time reference is lost. Therefore, the effective population of the sample group is reduced to NASA (84), FORD (118), FMC (97), Sylvania (80) and All Combined (379).

11. Absolute Adjusted Compensation (OAC) in Year 6 - Appendix 3I - Year 6 is chosen as a typical year, representative of the spread of OAC data for other years where the data patterns are quite similar.

12. Number of Persons Supervised (OSP) in Year 6 - Appendix 3J - Year 6 is again chosen as a typical year. Raw data are presented in this case since a plot obscures important details. At FMC and Ford, in Year 6 after TEMPLY, some 39% of

the participants were supervising zero people. This rises to 50% for Sylvania and 64% for NASA. For all organizations, about 85% of the people were supervising an average of less than 8 people.

13. Accumulated CE Hours (CETECH, CEBUS, CEOTH, CETOT) In Year 6 - Appendix 3K - These data for Year 6 after TEMPLY show the typical pattern of CE participation. By far most people took no CE at all (68% for CETECH, 90% for CEBUS, 92% for CEOTH). In the area of CEOTH, the accumulated total over 6 years in no case exceeds 200 hours and CEBUS is almost as low. CETECH participation is clearly much more wide spread--as one might expect. Note that the zeros shown here may be true zeros or may represent missing data--there is no way of knowing.

14. Total CE Hours - By Type of CE - Appendix 3L - These data show the pattern of participation by each organization, and the total for all by type of CE and by year. They include total CE hours in each category as well as the average CE hours for individuals who participated in CE. In addition, for each organization and for the total group, the ratios are shown of the average hours of CE participation in CEBUS and CEOTH relative to the average level of participation in CETECH.

15. Comparison of Average CE Hours Per Year - By Type of CE - Appendix 3M - These data show a comparison between average level per year of CE participation at Ford, FMC and Sylvania relative to NASA. It shows that individuals took much more CEOTH and much less CETECH in these three organizations than the individuals at NASA. The comparative ratios of total CETECH hours per year are also shown.

Based on these averaged data, compared to people at NASA, people at FMC took about 1/3 the amount of CETECH, people at Sylvania took about 50-60% and people at Ford took around 40-50%. The differences in average CEBUS participation tend to average out. However, Ford, FMC and Sylvania people all took, on the average, much more CEOTH than NASA people with FMC being most dominant in this area. Therefore, one might see stronger correlations with CETECH at NASA, about equivalent correlations with CEBUS and stronger correlations with CEOTH at FMC.

16. Total CE Hours Broken Down by Academic Categories - Appendix 3N - These data separate out participation by degree (M.S., No M.S., Ph.D.), by gradepoint average (Low, Mid, High GPA) and by School (Low Schools, Top Schools). Patterns of participation change by year and by organization. But, overall, people with M.S. degrees averaged about twice the level of total CE as did people without M.S. degrees and people with Ph.D.'s averaged more than people with M.S. degrees. There is not much difference either between GPA groups or School groups on an overall basis but considerable difference in some organizations individually.

Based on these data, if the amount of CE is important, then one might see significant differences in correlations as follows:

NASA - MS and Ph.D. higher correlations than No MS and Low and High GPA higher correlations than Mid GPA.

FORD - MS higher than No MS

FMC - Higher correlations with CEOTH

SYLVANIA - Ph.D. higher than MS and MS higher than No MS. Both Low and Mid GPA more than High GPA

TOTAL GROUP - Both MS and Ph.D. higher than No MS

17. Total CE Hours Broken Down By Location, Type Of Instruction, Credit vs. Non-Credit - Appendix 30 - This breakdown shows that, by far, most participation in CE was away from the employer's location. Furthermore, as might be expected, beyond Year 3 After TEMPLY, the Non-Credit participation far exceeds the Credit participation and the Non-Academic instruction far exceeds Academic instruction. This pattern relative to type of instruction might be quite different elsewhere, since all four organizations are located on the San Francisco Peninsula, quite far removed from U.C. Berkeley Extension programs in engineering (Stanford does not offer much non-credit CE).

18. CETECH And CEBUS, MS Before TEMPLY vs MS After TEMPLY - Appendix 3P - These data show considerably more participation in CETECH by people who received their MS degree after leaving college as full-time students than those who received their MS while full-time students. Most of this, as expected, is in the first 6 years After TEMPLY during which time the MS After TEMPLY group are taking courses towards an MS degree. Between Years 6 and 9 the pattern persists but tends to equalize after that.

Based on these data for all people combined, since the average hours of CETECH for people with MS After TEMPLY are significantly higher than those for people with MS Before TEMPLY, one might see stronger correlations between CETECH and performance for the people with MS After TEMPLY.

The patten with CEBUS is quite different. In the early years, the averages for the combined group are comparable but higher for the MS Before TEMPLY people whereas in the later years the MS After TEMPLY averages are higher.

19. Summary - It would appear that, based on the data available, the differences between organizations can be narrowed down as follows:

A. Data available from NASA people are much more complete than available from people at Ford, FMC and Sylvania. Missing data from these latter three groups are bound to create problems in determining true correlations.

B. NASA people took considerably more CETECH than people in the other groups. However, in all groups, participation in CETECH far exceeded participation in CEBUS and participation in CEBUS far exceeded participation in CEOTH.

C. Overwhelmingly, Non-Credit CE participation exceeded Credit CE participation--even in the early years. By far, most of this was with Non-Academic instructors and away from employer's location.

D. Differences in levels of CE participation between ability groups may lead to differences in correlations obtained.

E. Clearly, missing data make it more difficult to obtain significant and strong correlations.

F. The Questionnaires presented a formidable challenge to the participants and were viewed by many as representing an effort they were unwilling to expend. In a number of cases, even those who participated did not provide complete data, and this of course made finding significant correlations more difficult.

IV - BI-VARIATE RELATIONSHIPS - ABILITY VARIABLES vs. OUTCOMES - APPENDIX 4 -

All of the data showing bi-variate correlations of ability variables vs. each other and with outcomes are for the combined population of engineers. These data are shown in Appendices 4A and 4B. Since these data are for all people combined, all sample sizes are large. It should be expected that diversity between organizations would result in weaker correlations than those found within each organization and this is most often the case. The results are:

1. DRIVE:

	Ability Variables					
	IGPA	ISCH	ISH	IFR	IPR	OCR
Correlation	-	-	-	+0.24	+0.67	+0.34
Sample Size				(249)	(408)	(179)

No surprises here. The weak correlation with IFR is probably due to the large percentage of missing data. As expected, DRIVE is a key personality attribute to Present Supervisors and Chief Engineers.

	Outcome Variables				
	OAC	ORC	OSP	OCM	OCT
Correlation Range	+0.19 - +0.20	-	+0.16 - +0.17	-0.13 - -0.18	
Sample Size Range	(111 - 118)	-	(136 - 161)	(140 - 153)	

Weak correlations are probably due to diversity between participating groups. The negative correlations with OCM probably reflect people with higher DRIVE having greater expectations from their jobs than others.

2. IGPA (GRADE POINT AVERAGE)

	Ability Variables					
	ISCH	ISH	IFR	IPR	DRIVE	OCR
Correlation	-	+0.47	-	+0.13	-	-
Sample Size	-	(365)	-	(292)	-	-

Grade point average correlates moderately with academic honors. Its apparent lack of correlation with other ability measures is not unexpected.

	Outcome Variables				
	OAC	ORC	OSP	OCM	OCT
Correlation Range	-	-0.15 - -0.19	-	-	-0.15 - 0.19
Sample Size Range	-	(121 - 151)	-	-	(163 - 206)

The negative pattern of correlation with technical job challenge is persistent. The higher the GPA, the less technically challenging engineers perceive their jobs. Again, probably a case of raised expectations. The negative correlations with ORC in the later years seem real but defy rational explanation.

3. ISCH (QUALITY OF SCHOOL) -

No significant correlations are shown with either ability or outcome variables.

4. ISH (SCHOLASTIC HONORS)

	Ability Variables					
	IGPA	ISCH	IFR	IPM	DRIVE	OCR
Correlation	+0.47	-	-	-	-	+0.12
Sample Size	(365)	-	-	-	-	(220)

Engineers with scholastic honors are apparently not only better academic performers but their job performance capability seems to be evaluated a little more highly by Chief Engineers.

	Outcome Variables				
	OAC	ORC	OSP	OCM	OCT
Correlation Range	+0.17 - +0.18	+0.19 - +0.23	-	-	-0.10 - -0.16
Sample Size Range	(129 - 160)	(145 - 160)	-	-	(170 - 200)

Academic honors correlate positively but weakly with the compensation variables and negatively but weakly with technical job challenge. These results for OCT agree with the IGPA results.

5. IFR (FIRST OR EARLIEST SUPERVISOR'S RATING)

	Ability Variables					
	IGPA	ISCH	ISH	IPR	DRIVE	OCR
Correlation	-	-0.14	-	+0.34	+0.24	+0.34
Sample Size	-	(211)	-	(249)	(249)	(133)

Both First (or earliest) Supervisors and Present Supervisors ratings show moderate positive correlation - in effect affirming the original supervisor's evaluation. A further affirmation is the evaluation of the Chief Engineers. The negative correlation with ISCH might reflect the First (or earliest) Supervisor's having higher expectations of engineers coming from the better schools - and perhaps being disappointed. The weak positive correlation with DRIVE should be ignored as DRIVE was evaluated only from IPR data.

	Outcome Variables				
	OAC	ORC	OSP	OCM	OCT
Correlation Range	-	-	+0.03 - +0.24	-	-
Sample Size Range	-	-	(117 - 127)	-	-

Apparently the First (or earliest) Supervisors were weak predictors of responsibility capability but were not good predictors of any other outcome measure.

6. IPR (PRESENT SUPERVISOR'S RATING)

	Ability Variables					
	IGPA	ISCH	ISH	IFR	DRIVE	OCR
Correlation	+0.13	-	-	+0.34	+0.67	+0.50
Sample Size	(292)			(249)	(408)	(179)

Present Supervisors correlate positively and strongly with Chief Engineers in evaluating people (no surprise). They also evaluate DRIVE as a very important characteristic. Grade Point Average is apparently a weak positive predictor of the Present Supervisor's rating.

	Outcome Variables				
	OAC	ORC	OSP	OCM	OCT
Correlation Range	+0.17 - +0.18	-	+0.14 - +0.18	-0.20 - -0.22	-0.14 - -0.15
Sample Size Range	(111 - 118)	-	(136 - 161)	(140 - 167)	(166 - 168)

Both compensation and responsibility show weak positive correlations with IPR. The strength of these correlations may be weakened by the diversity between organizations. The negative pattern relating to job challenge persists. In this case, the higher the present supervisor's rating, the less challenging people perceive their jobs (better people demand more of a challenge).

7. SUMMARY -

For the combined group of people at least, none of the ability variables chosen are good predictors of performance. DRIVE, which is a personality trait, is strongly valued by Supervisors and Chief Engineers as expected. As previously stated, attempts to use multiple regression to derive a single measured "inherent ability" were not successful.

V - BI-VARIATE CORRELATIONS - CE VARIABLES AND DRIVE vs. OUTCOMES -

Some 20,000 bi-variate relationships have been calculated and most of the results are displayed in tabular form in Appendices 5 - 9. Because of the enormous mass of data, only a few scattergrams are included in this Report. Among these it seemed appropriate to show sample scattergrams which would give the reader a "feel" for what the data look like for typical levels of correlation coefficient, from R = 0.6 to R = 0.1. Specifically, the sample scattergrams shown are:

Appendix 4C (R = 0.615) - CETECH 18 vs. OAC 18 (NASA)
Appendix 4D (R = 0.51) - CETECH 12 vs. ORC 12 (NASA)
Appendix 4E (R = 0.399) - CETECH 06 vs. ORC 06 (NASA)
Appendix 4F (R = 0.324) - CEBUS 15 vs. OAC 15 (NASA)
Appendix 4G (R = 0.194) - CETECH 06 vs. ORC 06 (Total Group)
Appendix 4H (R = 0.066) - CEBUS 15 vs. ORC 15 (NASA)

In viewing these bi-variate correlations, it must be remembered that first the Study has tried to show the existence of statistically significant (as defined in the Study Design) relationships. This is done by looking at all people in each organization separately and then as a total group. Then the people in each organization and all combined are broken down into different ability groups, as determined by academic measures as well as ratings of Chief Engineers and Supervisors.

If the correlations persist within ability groups, then one is led to believe that the correlations obtained are independent of ability. However, to determine the relative contribution of each variable to job performance, including both CE and ability variables, it is necessary to look at the multiple regression analyses which follow in the next Section of this Report.

Note that the sample size ranges in the data which includes all people in each organization and then all combined are not small. They are large enough to enable determination of reliable correlations. However, some of the sample size ranges in the various ability groups become quite small. Nevertheless, these data are not used to derive basic conclusions but only to test for causal relationships. For this purpose, the patterns obtained are quite useful and are fully supported by the multiple regression results presented in a following Section.

In what follows, for each organization separately and for all combined, each outcome variable is looked at separately and a summary is made of the correlations between each of these variables and each of the CE variables. Then data filtering is applied (only for all people in each organization separately) by eliminating first all participants who recorded zero hours of CETECH and then successively those who took less than 100, 200 and 300 hours of CETECH and these results are summarized. By eliminating zero hours of CETECH, the problem of not being able to distinguish between those who truly recorded zero hours and those who simply didn't fill in the question is eliminated. By establishing different threshold participation levels of CETECH, it might establish a minimum level of CETECH which is required to make a difference.

1. Primary Outcome Variables

A. OAC (ABSOLUTE COMPENSATION)

FORD

OAC - FORD
(APPENDIX 5)

± CORRELATION RANGE (SAMPLE SIZE RANGE)

	CETOT	CETECH	CEBUS	CEOTH	DRIVE
ALL PEOPLE				+0.30 - +0.43 (36 - 45)	+0.33 - +0.38 (29 - 30)
M.S.		-0.43 - +0.44 (17 - 20)			
NO M.S.					+0.43 - +0.47 (19 - 23)
PH.D.					
LOW SCHOOLS					
TOP SCHOOLS	+0.65 - +0.70 (10 - 11)				
LOW GPA			+0.50 - +0.62 (16 - 16)		
MID GPA			+0.43 - +0.57 (14 - 18)	+0.47 - +0.67 (8 - 14)	
HIGH GPA					
HONORS					+0.48 - +0.57 (11 - 15)
NO HONORS			+0.31 - +0.53 (33 - 35)	+0.31 - +0.46 (29 - 33)	
LOW IPR					
MID IPR					
HIGH IPR			+0.83 - +0.83 (8 - 8)		
LOW IFR		+0.49 - +0.62 (8 - 14)			+0.55 - +0.91 (4 - 11)
MID IFR					
HIGH IFR			+0.78 - +0.83 (8 - 9)		
LOW OCR					+0.52 - +0.63 (17 - 19)
MID OCR				+0.90 - +0.93 (5 - 8)	
HIGH OCR					

```
OUTCOME VS CE                                                                    05/09/78        PAGE   13

FILE    ROI          (CREATION DATE = 11/02/77)    CONTINUING EDUCATION -- ENGINEERS
SUBFILE    FORD
SCATTERGRAM OF     (DOWN) OAC06                                    (ACROSS) CEOTH06
```

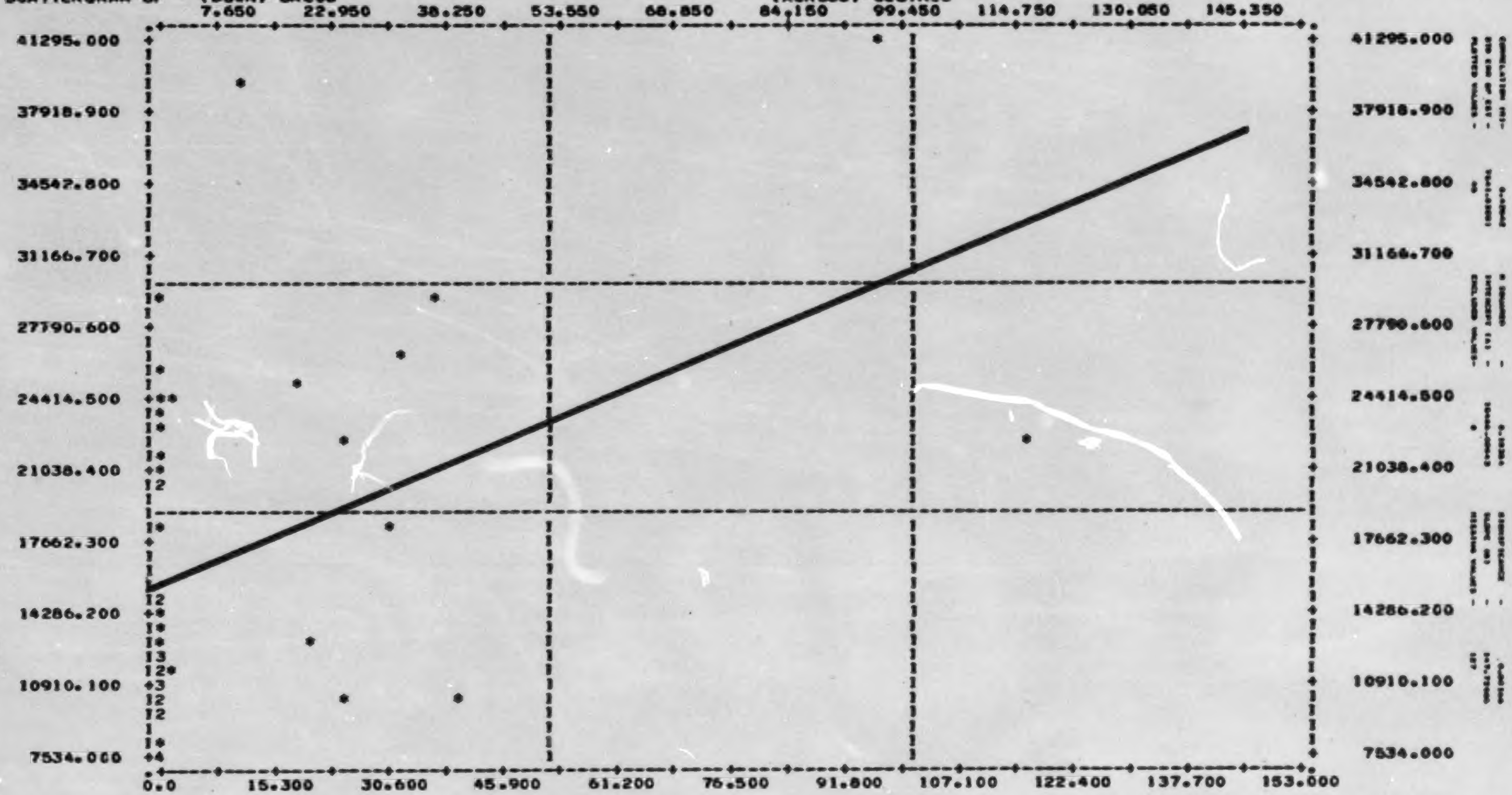

FIGURE 1

Page 31A

Moderate positive correlations are shown with both CEOTH and DRIVE for All People. These are marginally persistent within ability groups. CEBUS shows evidence of moderate-strong positive relationships within different groups.

Figure 1 is a scattergram of the OAC relationship with CEOTH for year 6.

Data filtering for All People (Appendix 21a) produces the following results:

± CORRELATION RANGE (SAMPLE SIZE RANGE)

	WITHOUT FILTERING	NOT COUNTING 0 CETECH HRS	NOT COUNTING LESS THAN 100 CETECH HRS	NOT COUNTING LESS THAN 200 CETECH HRS	NOT COUNTING LESS THAN 300 CETECH HRS
CETECH	---	---	+0.43 - +0.54 (17-20)	---	---
CEBUS	---	+0.49 - +0.66 (21-38)	+0.57 - +0.63 (17-18)	+0.59 - +0.60 (12-12)	---

These filtered results bring out strong positive correlations with CEBUS but show an effect relative to CETECH at only one filter level.

Based on both the unfiltered and filtered data, the independent variables CEBUS, CEOTH and DRIVE all show patterns of moderate-strong positive correlations with absolute compensation which show some evidence (but not clear cut) of being independent of the ability measured used.

NASA

OAC - NASA

± CORRELATION RANGE (SAMPLE SIZE RANGE)

(APPENDIX 6)

	CETOT	CETECH	CEBUS	CEOTH	DRI[illegible]
ALL PEOPLE	+0.54 - +0.70 (35 - 48)	+0.54 - +0.67 (35 - 48)	+0.32 - +0.47 (23 - 48)	+0.33 - +0.56 (23 - 48)	
M.S.	+0.47 - +0.74 (14 - 32)	+0.47 - +0.67 (14 - 32)	+0.36 - +0.69 (14 - 32)	+0.36 - +0.58 (20 - 28)	
NO M.S.	+0.39 - +0.55 (16 - 21)	+0.47 - +0.52 (16 - 21)			
PH.D.				+0.63 - +0.68 (8 - 10)	
LOW SCHOOLS	+0.56 - +0.72 (19 - 33)	+0.55 - +0.69 (19 - 33)	+0.36 - +0.48 (26 - 33)	+0.42 - +0.69 (26 - 26)	
TOP SCHOOLS	+0.51 - +0.69 (14 - 19)	+0.51 - +0.69 (14 - 19)		+0.45 - +0.52 (15 - 16)	-0.99 - [illegible].44 (3 - [illegible]
LOW GPA	+0.55 - +0.69 (13 - 17)	+0.53 - +0.65 (13 - 17)		+0.46 - +0.58 (13 - 17)	
MID GPA	+0.43 - +0.63 (10 - 16)	+0.44 - +0.63 (10 - 16)	+0.68 - +0.96 (4 - 13)		
HIGH GPA	+0.56 - +0.91 (5 - 16)	+0.56 - +0.85 (5 - 16)		+0.50 - +0.64 (16 - 16)	
HONORS	+0.52 - +0.89 (11 - 21)	-0.42 - +0.79 (11 - 21)	+0.48 - +0.51 (15 - 19)	+0.40 - +0.64 (15 - 19)	
NO HONORS	+0.54 - +0.73 (23 - 30)	+0.52 - +0.70 (23 - 30)		+0.35 - +0.47 (24 - 27)	
LOW IPR	+0.66 - +0.82 (7 - 9)	+0.50 - +0.71 (7 - 9)			
MID IPR	+0.58 - +0.86 (7 - 10)	+0.59 - +0.88 (7 - 10)			
HIGH IPR	+0.67 - +0.88 (11 - 12)	+0.62 - +0.88 (6 - 12)		+0.78 - +0.78 (7 - 12)	
LOW IFR	+0.50 - +0.79 (9 - 11)				
MID IFR	+0.51 - +0.68 (10 - 13)	+0.47 - +0.65 (10 - 13)		+0.76 - +0.84 (7 - 14)	
HIGH IFR	+0.54 - +0.81 (9 - 12)	+0.49 - +0.83 (9 - 11)			

All People show strong positive correlations with CETOT and CETECH, moderate positive correlations with CEBUS and moderate-strong positive correlations with CEOTH. These relationships are quite persistent within different ability groups. Note that as sample sizes get smaller, the correlations get higher. This is to be expected because high correlations are necessary with small sample sizes for statistical significance to be shown.

The NASA data appear more strongly and persistently correlated than that for other organizations. It is, therefore, tempting to possibly attribute this to some hypothetical and unique NASA policy which might reward participation in CE per se, rather than just performance. This hypothesis was checked with NASA and it is simply not the case. Neither NASA nor any of the other organizations reward participation in CE directly, they reward performance.

Scattergrams showing the OAC relationships in Year 12 with CETECH, CEBUS and CEOTH are shown in Figures 2, 3, 4. Figure 5 shows the OAC-CETECH relationship in Year 18 and Figure 6 shows the OAC-CEBUS relationship in Year 15.

Data filtering (Appendix 21C) produces the following results:

± CORRELATION RANGE (SAMPLE SIZE RANGE)

	WITHOUT FILTERING	NOT COUNTING 0 CETECH HRS	NOT COUNTING LESS THAN 100 CETECH HRS	NOT COUNTING LESS THAN 200 CETECH HRS	NOT COUNTING LESS THAN 300 CETECH HRS
CETECH	+0.54 - +0.67 (35-48)	+0.45 - +0.65 (24-41)	+0.36 - +0.64 (22-32)	+0.53 - +0.61 (12-26)	+0.52 - +0.63 (11-23)
CEBUS	+0.32 - +0.47 (23-48)	+0.41 - +0.51 (18-41)	+0.36 - +0.37 (22-32)	---	---

In this case, data filtering doesn't change much relative to either CETECH or CEBUS but correlations are weakened for CEBUS because of eliminating too many people.

These data indicate that the correlations between compensation and CE participation are largely independent of the ability measures used.

FMC

OAC - FMC

± CORRELATION RANGE (SAMPLE SIZE RANGE)

(APPENDIX 7)	CETOT	CETECH	CEBUS	CEOTH	DRIVE
ALL PEOPLE	+0.39 - +0.45 (26 - 35)	+0.34 - +0.38 (21 - 31)	+0.41 - +0.67 (26 - 35)		+0.37 - +0.44 (24 - 27)
M.S.			+0.73 - +0.81 (8 - 11)		-0.64 - +0.78 (7 - 11)
NO M.S.	+0.38 - +0.46 (21 - 24)	+0.38 - +0.42 (17 - 23)	+0.48 - +0.54 (16 - 24)		
PH.D.					
LOW SCHOOLS	+0.58 - +0.64 (19 - 20)	+0.41 - +0.57 (17 - 20)	+0.38 - +0.74 (17 - 21)	+0.46 - +0.55 (19 - 20)	
TOP SCHOOLS			+0.59 - +0.95 (4 - 13)		
LOW GPA			+0.62 - +0.88 (9 - 11)		
MID GPA			+0.76 - +0.80 (6 - 7)		
HIGH GPA	+0.40 - +0.56 (10 - 17)	+0.77 - +0.99 (4 - 12)	+0.55 - +0.87 (10 - 15)	+0.59 - +0.84 (10 - 15)	
HONORS	+0.48 - +0.79 (11 - 13)				+0.52 - +0.71 (10 - 12)
NO HONORS			+0.45 - +0.53 (16 - 22)		
LOW IPR		+0.63 - +0.86 (6 - 9)			
MID IPR		-0.68 - +0.71 (7 - 9)			
HIGH IPR					-0.54 - +0.99 (3 - 13)
LOW IFR					
MID IFR					
HIGH IFR					
LOW OCR	+0.63 - +0.70 (8 - 13)		+0.78 - +0.85 (9 - 13)		+0.67 - +0.83 (8 - 8)
MID OCR			+0.66 - +0.82 (5 - 11)		
HIGH OCR	+0.54 - +0.61 (10 - 11)				-0.46 - -0.77 (8 - 9)

```
OUTCOME VS CE                                                              05/09/78          PAGE   16

FILE    R01       (CREATION DATE = 11/02/77)    CONTINUING EDUCATION -- ENGINEERS
SUBFILE     NASA
SCATTERGRAM OF      (DOWN) OAC12                                 (ACROSS) CETCH12
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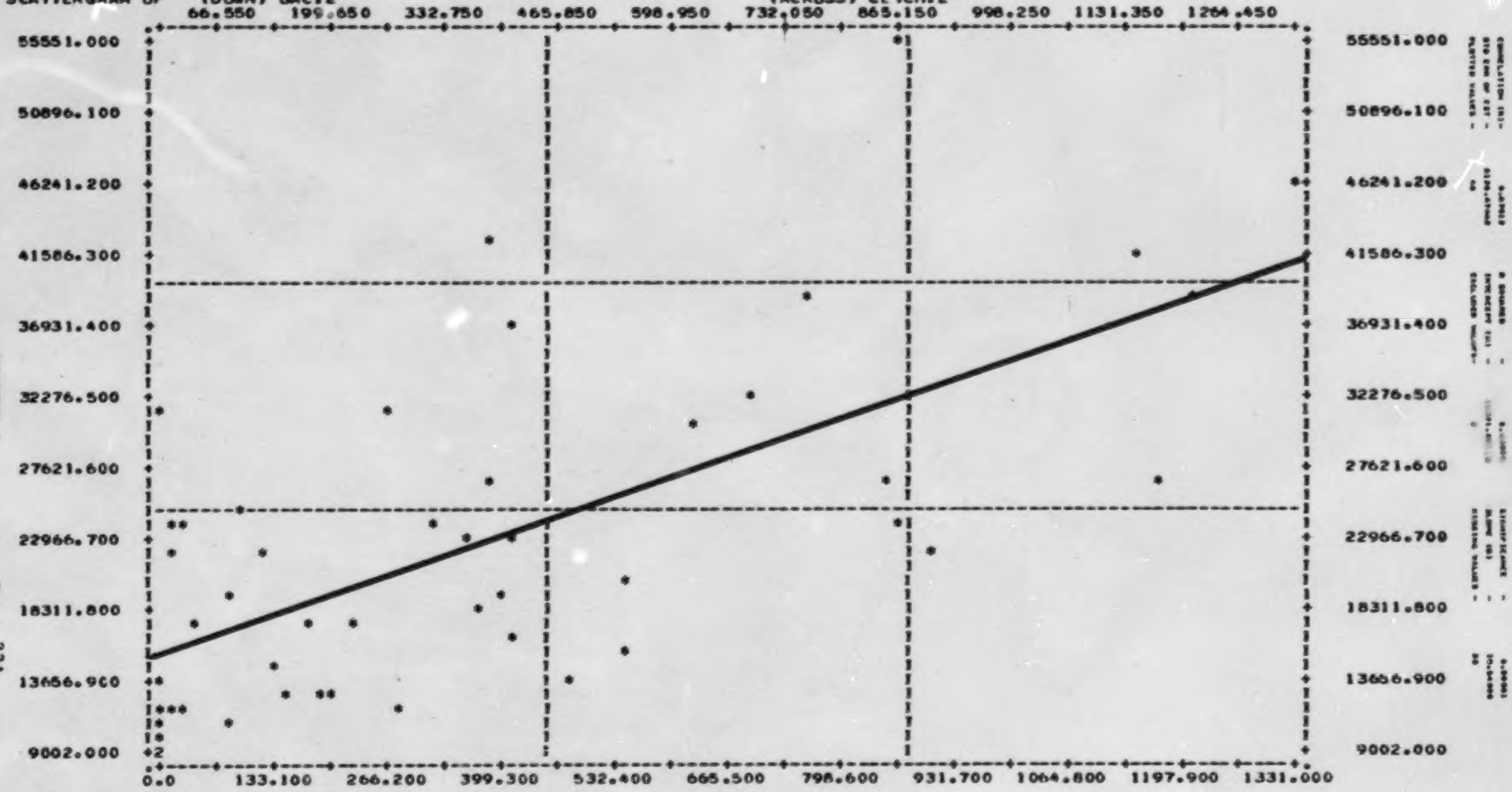

FIGURE 2

Page 33A

OUTCOME VS CE 05/09/78 PAGE 24

FILE ROI (CREATION DATE = 11/02/77) CONTINUING EDUCATION -- ENGINEERS
SUBFILE NASA
SCATTERGRAM OF (DOWN) OAC12 (ACROSS) CEBUS12

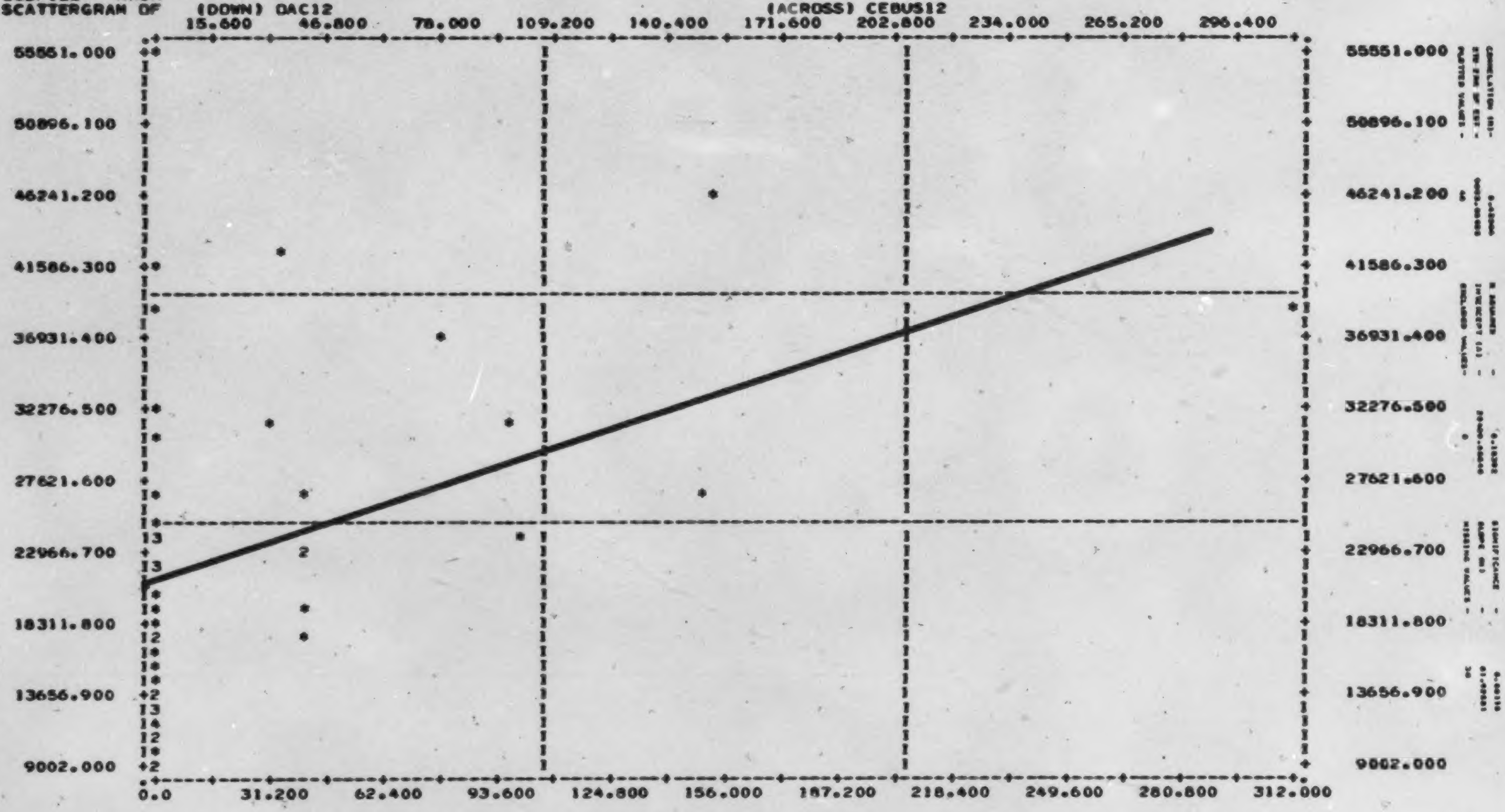

FIGURE 3 Page 33B

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OUTCOME VS CE                                                            05/09/78        PAGE   28

FILE    ROI        (CREATION DATE = 11/02/77)    CONTINUING EDUCATION -- ENGINEERS
SUBFILE    NASA
SCATTERGRAM OF     (DOWN) OAC12                              (ACROSS) CEOTH12
```

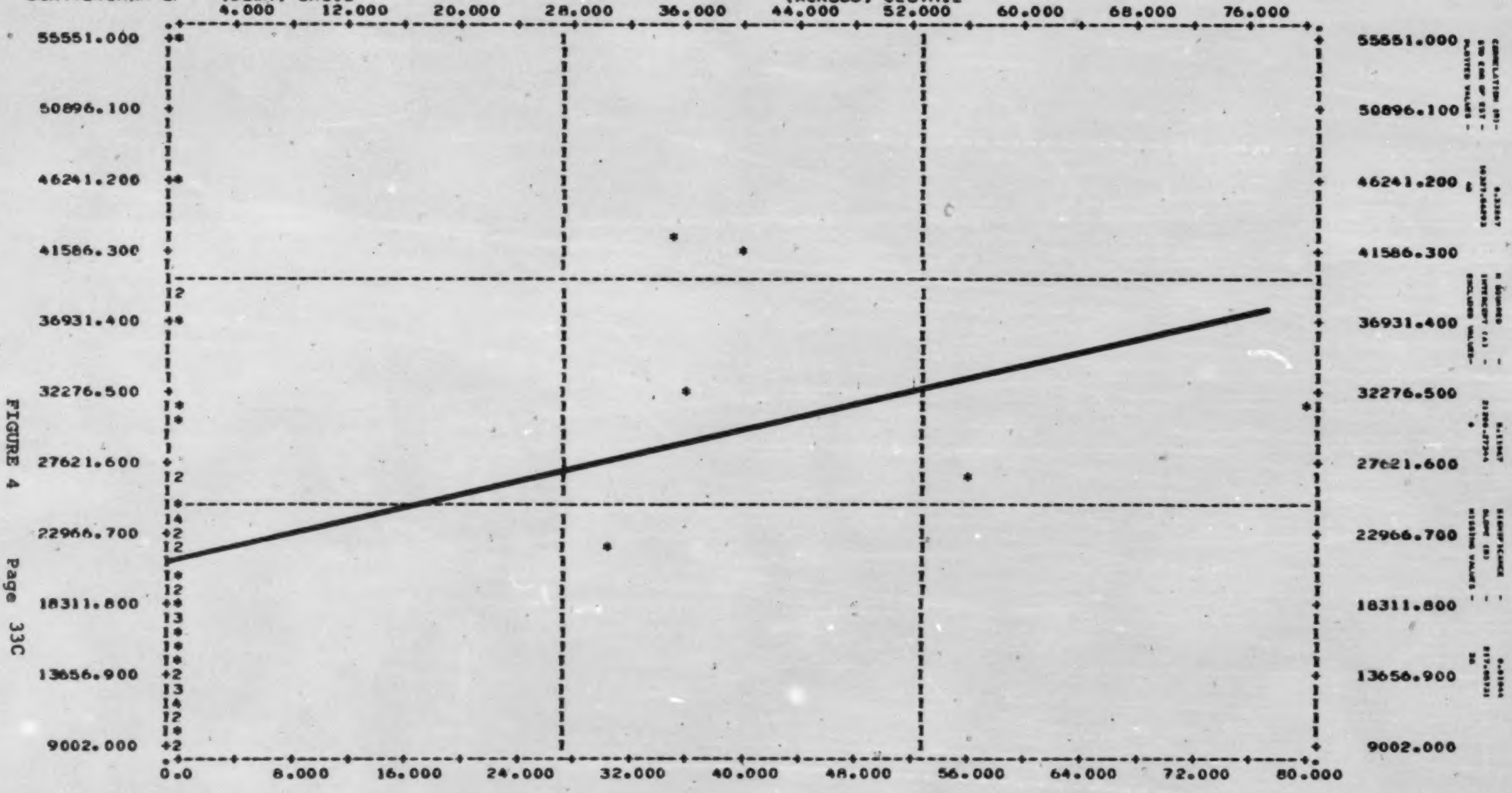
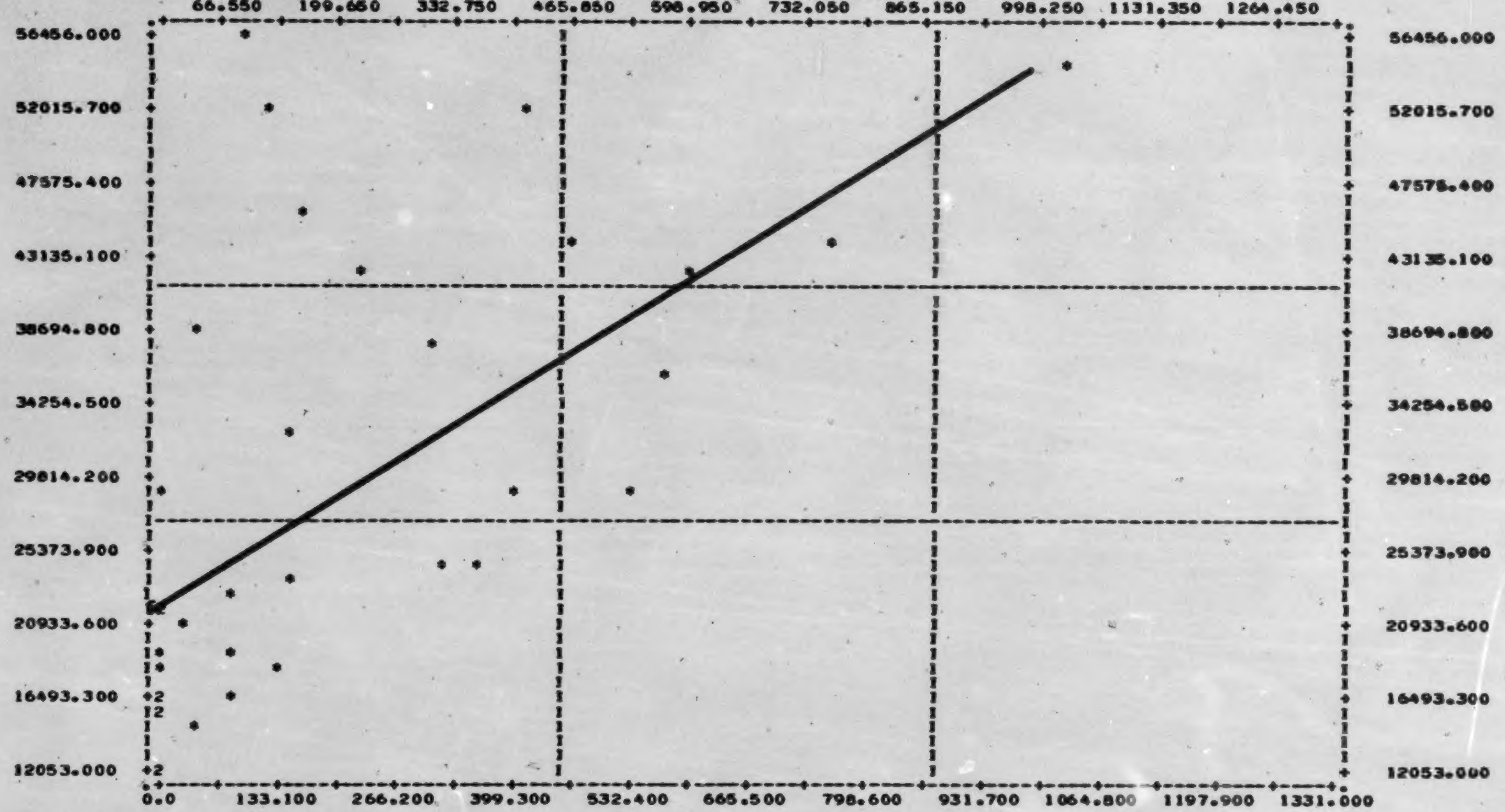


FIGURE 4   Page 33C

OUTCOME VS CE 05/09/78 PAGE 18

FILE ROI (CREATION DATE = 11/02/77) CONTINUING EDUCATION -- ENGINEERS
SUBFILE NASA
SCATTERGRAM OF (DOWN) OAC18 (ACROSS) CETCH18



CORRELATION (R)- 0.61538 R SQUARED - 0.37868 SIGNIFICANCE - 0.00004
STD ERR OF EST - 10674.63480 INTERCEPT (A) - 22496.63003 SLOPE (B) - 30.24380
PLOTTED VALUES - 38 EXCLUDED VALUES- 0 MISSING VALUES - 81

FIGURE 5

Page 33D

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OUTCOME VS CE                                                    05/09/78        PAGE   26
FILE   ROI       (CREATION DATE = 11/02/77)   CONTINUING EDUCATION -- ENGINEERS
SUBFILE   NASA
SCATTERGRAM OF      (DOWN) OAC15                                 (ACROSS) CEBUS15
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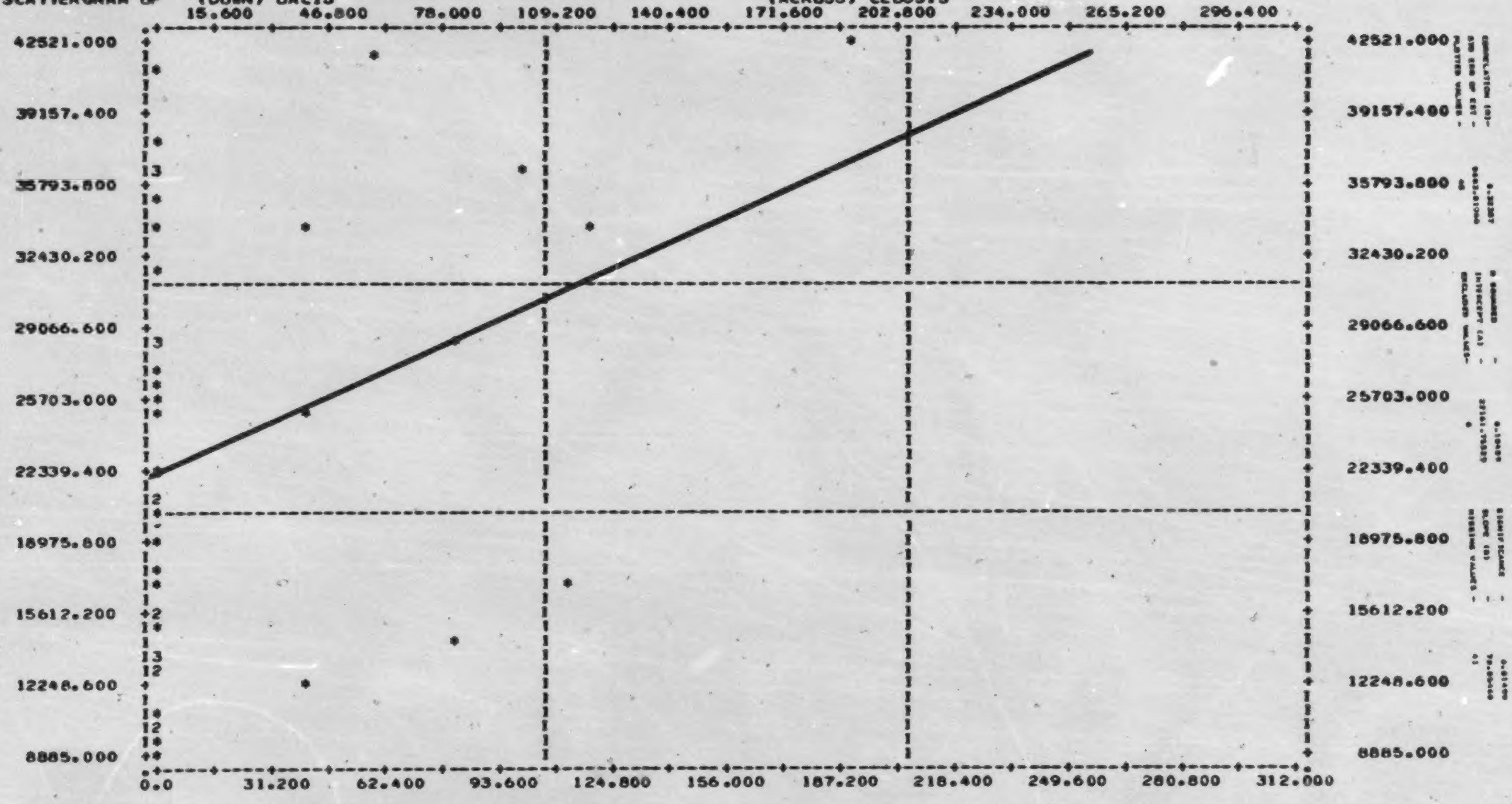

FIGURE 6 Page 33E

All People show moderate-strong positive correlations with CEBUS and moderate positive correlations with CETOT, CETECH and DRIVE. The correlations with the CE variables persist reasonably well within the different ability groups.

Scattergrams of the relationship between OAC and CETECH in Year 12 and OAC and CEBUS in Year 18 are shown in Figures 7 and 8.

Data filtering (Appendix 21E) produces the following results:

± CORRELATION RANGE (SAMPLE SIZE RANGE)

	WITHOUT FILTERING	NOT COUNTING 0 CETECH HRS	NOT COUNTING LESS THAN 100 CETECH HRS	NOT COUNTING LESS THAN 200 CETECH HRS	NOT COUNTING LESS THAN 300 CETECH HRS
CETECH	+0.34 - +0.41 (21-31)	+0.44 - +0.5 (20-23)	---	---	---
CEBUS	+0.41 - +0.67 (26-35)	+0.49 - +0.72 (15-25)	+0.83 - +0.96 (5 - 5)	---	---

Here data filtering improves the correlations but sample sizes at higher filter levels limit the usefulness of the technique.

These data show that correlations between CE and compensation (particularly CEBUS) are reasonably independent of the ability measures used.

SYLVANIA

OAC - SYLVANIA

± CORRELATION RANGE (SAMPLE SIZE RANGE)

(APPENDIX 8)	CETOT	CETECH	CEBUS	CEOTH	DRIVE
ALL PEOPLE	+0.33 - +0.66 (28 - 34)	+0.34 - +0.56 (28 - 34)			
M.S.			+0.43 - +0.45 (16 - 17)		
NO M.S.	+0.66 - +0.82 (11 - 13)	+0.51 - +0.78 (11 - 13)	+0.51 - +0.77 (10 - 13)		
PH.D.					
LOW SCHOOLS	+0.40 - +0.65 (18 - 20)	+0.42 - +0.57 (18 - 20)	+0.45 - +0.56 (16 - 18)		
TOP SCHOOLS					
LOW GPA	+0.55 - +1.00 (3 - 12)	+0.52 - +1.00 (8 - 12)	+0.53 - +0.74 (8 - 12)		
MID GPA					
HIGH GPA					
HONORS					
NO HONORS	+0.48 - +1.00 (3 - 20)	+0.46 - +0.81 (12 - 20)			
LOW IPR	+0.81 - +0.82 (6 - 8)	+0.77 - +0.82 (6 - 8)			
MID IPR					
HIGH IPR					
LOW IFR					
MID IFR					
HIGH IFR					
LOW OCR	+0.39 - +0.67 (20 - 27)	+0.38 - +0.50 (20 - 23)			
MID OCR					
HIGH OCR					

All People show moderate-strong positive correlations with CETOT and CETECH. However, these results are remarkably different from the others. Persistence of the correlations is within the low ability groups only, i.e., No MS, Low Schools,

OUTCOME VS CE 05/09/78 PAGE 31

FILE RO1 (CREATION DATE = 11/02/77) CONTINUING EDUCATION -- ENGINEERS
SUBFILE FMC
SCATTERGRAM OF (DOWN) DAC12 (ACROSS) CETCH12

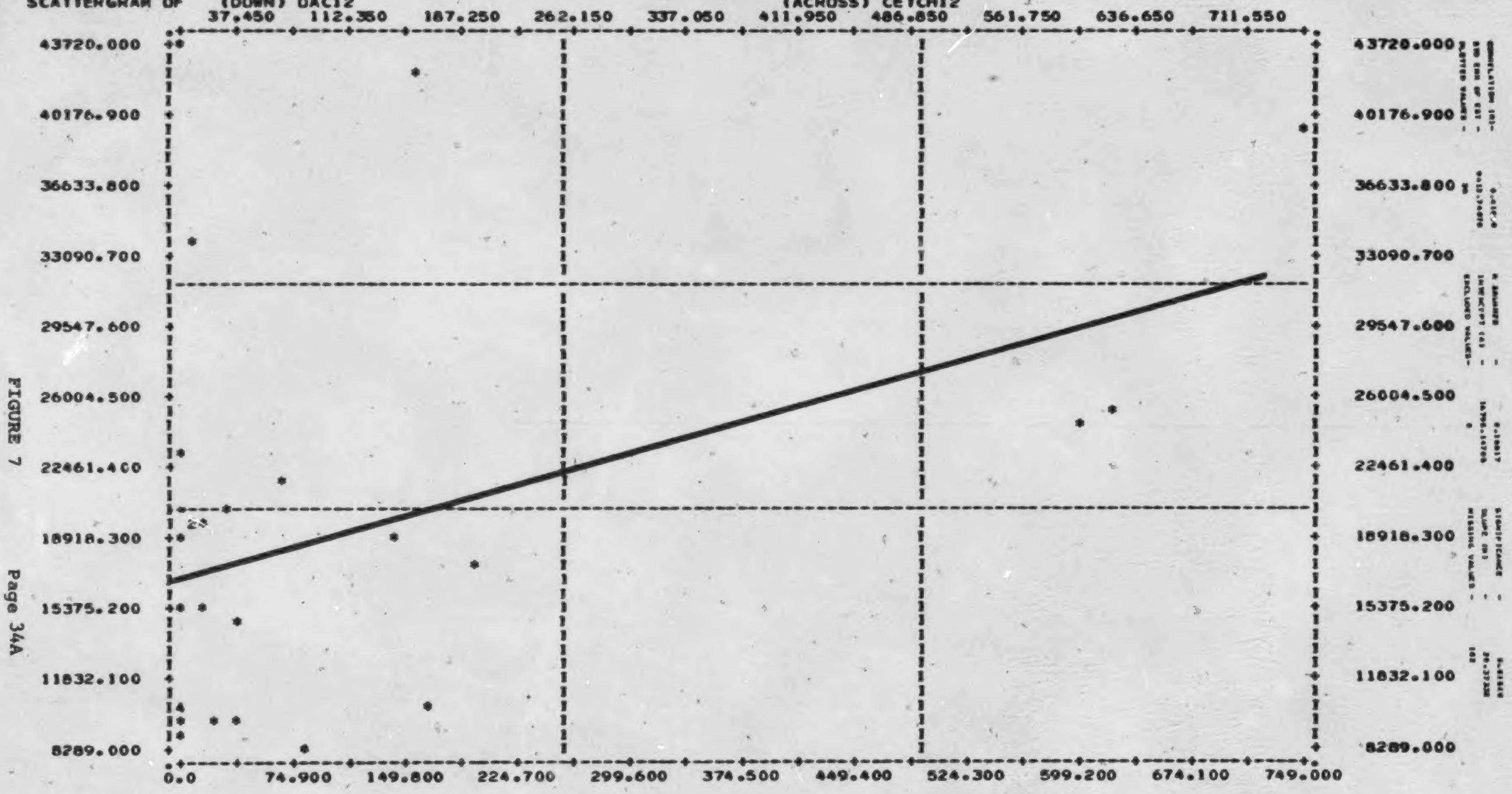

FIGURE 7

Page 34A

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OUTCOME VS CE                                                                          05/09/78        PAGE   33
FILE    R01      (CREATION DATE = 11/02/77)   CONTINUING EDUCATION -- ENGINEERS
SUBFILE   FMC
SCATTERGRAM OF     (DOWN) OAC18                                  (ACROSS) CEBUS18
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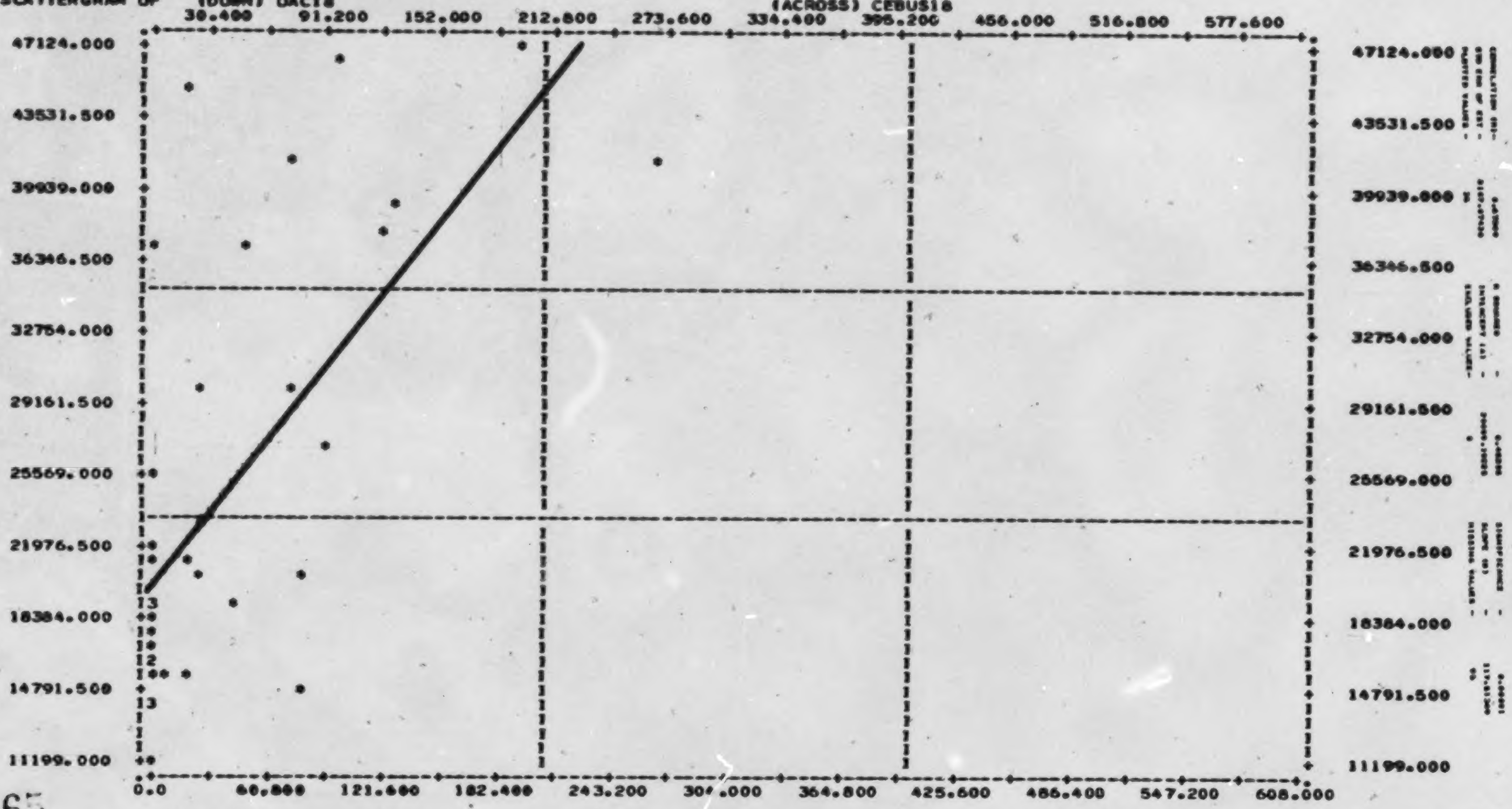

FIGURE 8

Page 34B

Low GPA, No Honors, Low IPR and Low OCR. This shows the effects of CE to be independent of ability, but perhaps only for groups of people who are categorized by this Study as having less "inherent ability". Why does this pattern emerge at Sylvania and not in the other organizations? DRIVE shows no pattern of relationships.

Scattergrams showing the relationships for all people with CETECH and CEBUS in Year 18 are shown in Figures 9 and 10.

Data filtering (Appendix 21G) produces the following:

± CORRELATION RANGE (SAMPLE SIZE RANGE)

	WITHOUT FILTERING	NOT COUNTING 0 CETECH HRS	NOT COUNTING LESS THAN 100 CETECH HRS	NOT COUNTING LESS THAN 200 CETECH HRS	NOT COUNTING LESS THAN 300 CETECH HRS
CETECH	+0.34 - +0.56 (28-34)	+0.38 - +0.63 (22-24)	---	---	---
CEBUS	---	---	---	---	---

Here the correlations with CETECH are strengthened for the zero CETECH hour case but lost for all others.

These data show that correlations between CE and compensation are reasonably independent of ability measures used but only for the lower ability groups. Also, a pattern of moderate-strong positive correlations emerges with CEBUS in some ability groups even though All People do not show this. Note that Sylvania, like NASA, shows no correlations with DRIVE. Sylvania also shows no correlations at all with CEOTH.

ALL COMBINED

OAC - ALL COMBINED ± CORRELATION RANGE (SAMPLE SIZE RANGE)

(APPENDIX 9)

	CETOT	CETECH	CEBUS	CEOTH	DRIVE
ALL PEOPLE	+0.29 - +0.47 (134 - 160)	+0.25 - +0.45 (134 - 160)	+0.17 - +0.36 (129 - 160)	+0.12 - +0.21 (134 - 160)	+0.19 - +0.20 (111 - 118)
M.S.	+0.29 - +0.53 (59 - 76)	+0.28 - +0.53 (59 - 76)	+0.24 - +0.43 (59 - 73)	+0.22 - +0.42 (41 - 66)	
NO M.S.	+0.26 - +0.36 (76 - 85)	+0.22 - +0.28 (75 - 85)	+0.19 - +0.33 (63 - 85)	+0.19 - +0.26 (76 - 85)	
PH.D.					
LOW SCHOOLS	+0.28 - +0.49 (81 - 102)	+0.23 - +0.49 (81 - 102)	+0.18 - +0.39 (97 - 102)		
TOP SCHOOLS	+0.40 - +0.56 (39 - 53)	+0.38 - +0.50 (39 - 53)	+0.30 - +0.31 (45 - 53)		
LOW GPA	+0.22 - +0.69 (45 - 53)	+0.38 - +0.51 (45 - 53)	+0.26 - +0.52 (45 - 53)	+0.24 - +0.28 (45 - 53)	
MID GPA	+0.27 - +0.49 (36 - 45)	+0.35 - +0.39 (36 - 45)	+0.31 - +0.42 (32 - 44)		
HIGH GPA	+0.41 - +0.51 (43 - 48)	+0.39 - +0.51 (43 - 48)	+0.41 - +0.47 (44 - 46)	+0.32 - +0.50 (32 - 46)	
HONORS	+0.27 - +0.48 (57 - 62)	+0.24 - +0.47 (49 - 62)	+0.22 - +0.29 (50 - 62)		+0.23 - +0.31 (50 - 55)
NO HONORS	+0.29 - +0.55 (85 - 101)	+0.22 - +0.46 (85 - 101)	+0.21 - +0.46 (85 - 101)	+0.17 - +0.30 (88 - 101)	
LOW IPR	+0.33 - +0.54 (34 - 40)	+0.32 - +0.56 (34 - 40)			
MID IPR	+0.34 - +0.47 (24 - 29)	+0.22 - +0.48 (25 - 28)	+0.31 - +0.49 (24 - 29)	+0.35 - +0.40 (24 - 29)	
HIGH IPR	+0.33 - +0.62 (19 - 33)	+0.33 - +0.65 (19 - 33)			
LOW IFR	+0.43 - +0.56 (29 - 41)	+0.48 - +0.56 (29 - 39)	+0.29 - +0.48 (16 - 37)		
MID IFR	+0.29 - +0.53 (27 - 40)	+0.47 - +0.51 (27 - 35)	+0.33 - +0.42 (27 - 35)		
HIGH IFR	+0.30 - +0.45 (21 - 30)		+0.37 - +0.51 (21 - 30)		
LOW OCR	+0.28 - +0.40 (57 - 70)	+0.23 - +0.33 (57 - 70)	+0.26 - +0.42 (57 - 67)		+0.28 - +0.34 (44 - 53)
MID OCR			+0.46 - +0.61 (13 - 17)		
HIGH OCR			+0.46 - +0.49 (20 - 28)		-0.37 - -0.42 (20 - [illegible])

OUTCOME VS CE 05/09/78 PAGE 38

FILE ROI (CREATION DATE = 11/02/77) CONTINUING EDUCATION -- ENGINEERS
SUBFILE SYLVANIA
SCATTERGRAM OF (DOWN) DAC18 (ACROSS) CETCH18

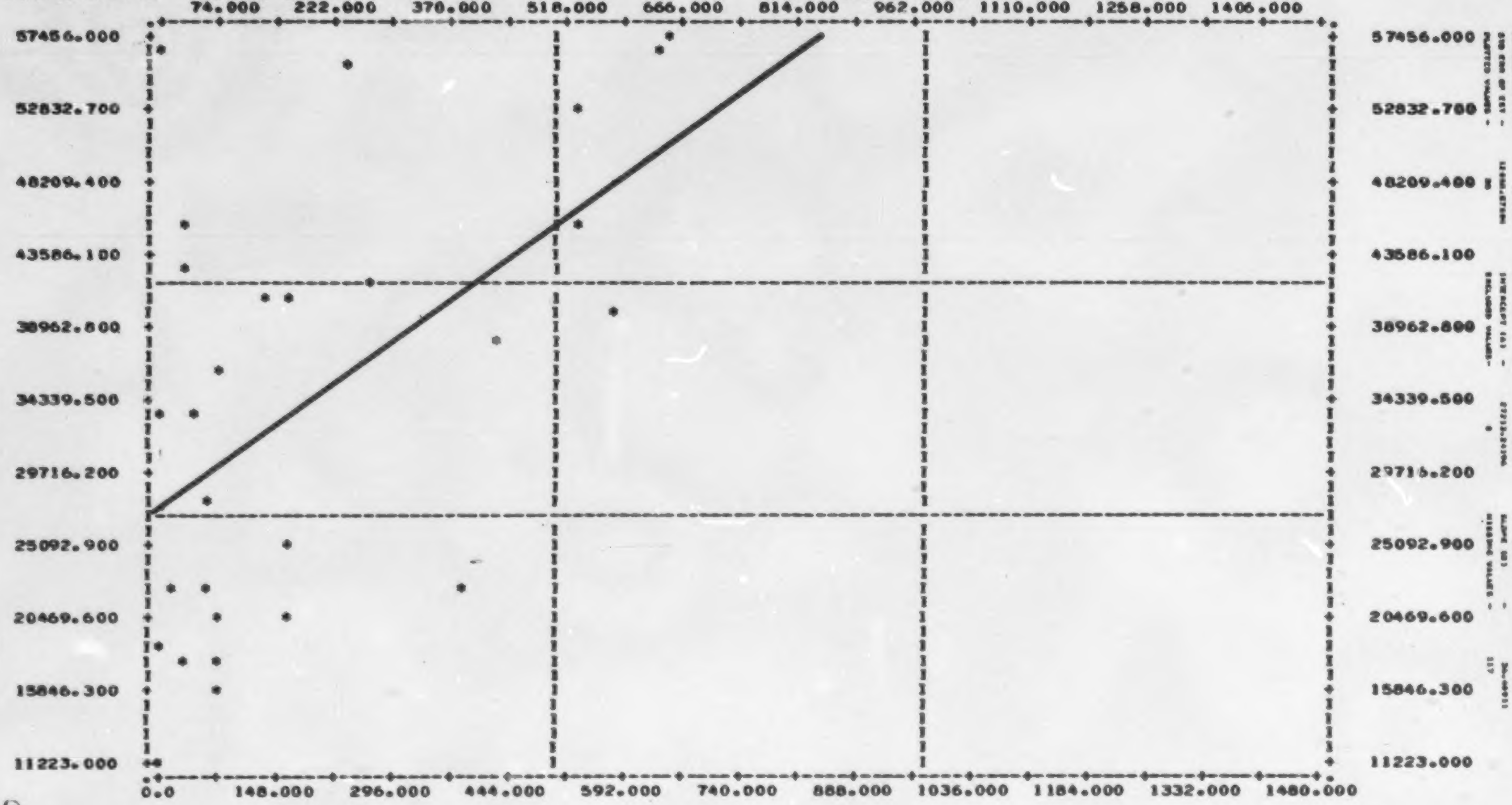

FIGURE 9

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OUTCOME VS CE                                                            05/09/78        PAGE   40

FILE    ROI       (CREATION DATE = 11/02/77)    CONTINUING EDUCATION -- ENGINEERS
SUBFILE    SYLVANIA
SCATTERGRAM OF    (DOWN) OAC18                               (ACROSS) CEBUS18
```

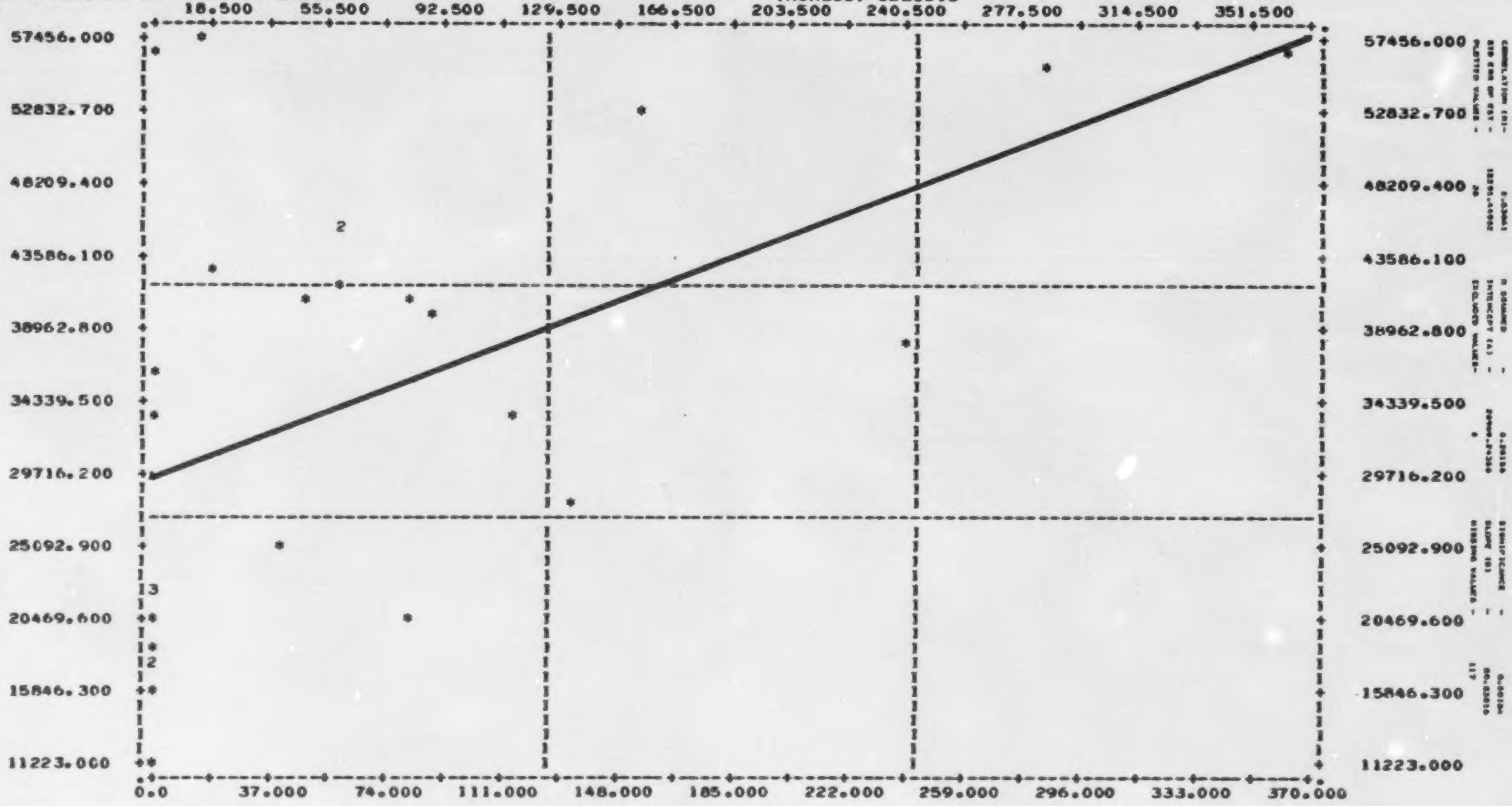

FIGURE 10   Page 35B

All People show weak-moderate positive correlations between CETOT, CETECH, CEBUS and compensation and weak positive correlations between CEOTH and DRIVE and compensation. These correlations persist within ability groups for CETOT, CETECH and CEBUS - and to a smaller extent for CEOTH. DRIVE shows no persistence within ability groups. Within many ability groups, the correlations become stronger, with the correlation range in many cases becoming moderate-strong. Scattergrams showing the relationship between OAC and CETECH in Year 12 and between OAC and CEBUS in Year 12 are shown in Figures 11 and 12.

The pattern of the data indicates that, to a significant extent, the relationships between CE and compensation are positive and largely independent of ability. Further, significant positive relationships are shown between different types of CE (and to some extent DRIVE) and compensation. These are summarized below:

CORRELATIONS

	CETOT	CETECH	CEBUS	CEOTH	DRIVE
Ford				Moderate	Moderate
NASA	Strong	Strong	Moderate	Mod-Strong	
FMC	Moderate	Moderate	Mod-Strong		Moderate
Sylvania	Mod-Strong	Mod-Strong			
All Combined	Weak-Mod.	Weak-Mod	Weak-Mod.	Weak	Weak

The correlations shown tend to get stronger when potential missing data problems are eliminated and with data filtering which eliminates people reporting low levels of CE participation. The low correlations with DRIVE and the consistent positive effect shown by CEOTH are both phenomena which would not have been predicted.

The NASA participants reported a much higher level of effort in CE than others. This may account for the NASA data showing stronger correlation and persistence patterns. The Sylvania data show a unique pattern of persistence of correlations only within groups of lower inherent ability (as defined by the Study). This is an unexplained phenomenon. The Ford data show the least pattern of relationships and no significant correlations with CETECH or CEBUS for all people until the threshold level of CE participation is raised. Then strong positive correlations evolve with CEBUS.

OUTCOME VS CE 05/09/78 PAGE 2

FILE R01 (CREATION DATE = 11/02/77) CONTINUING EDUCATION -- ENGINEERS
SUBFILE FORD NASA FMC SYLVANIA
SCATTERGRAM OF (DOWN) OAC12 (ACROSS) CETCH12

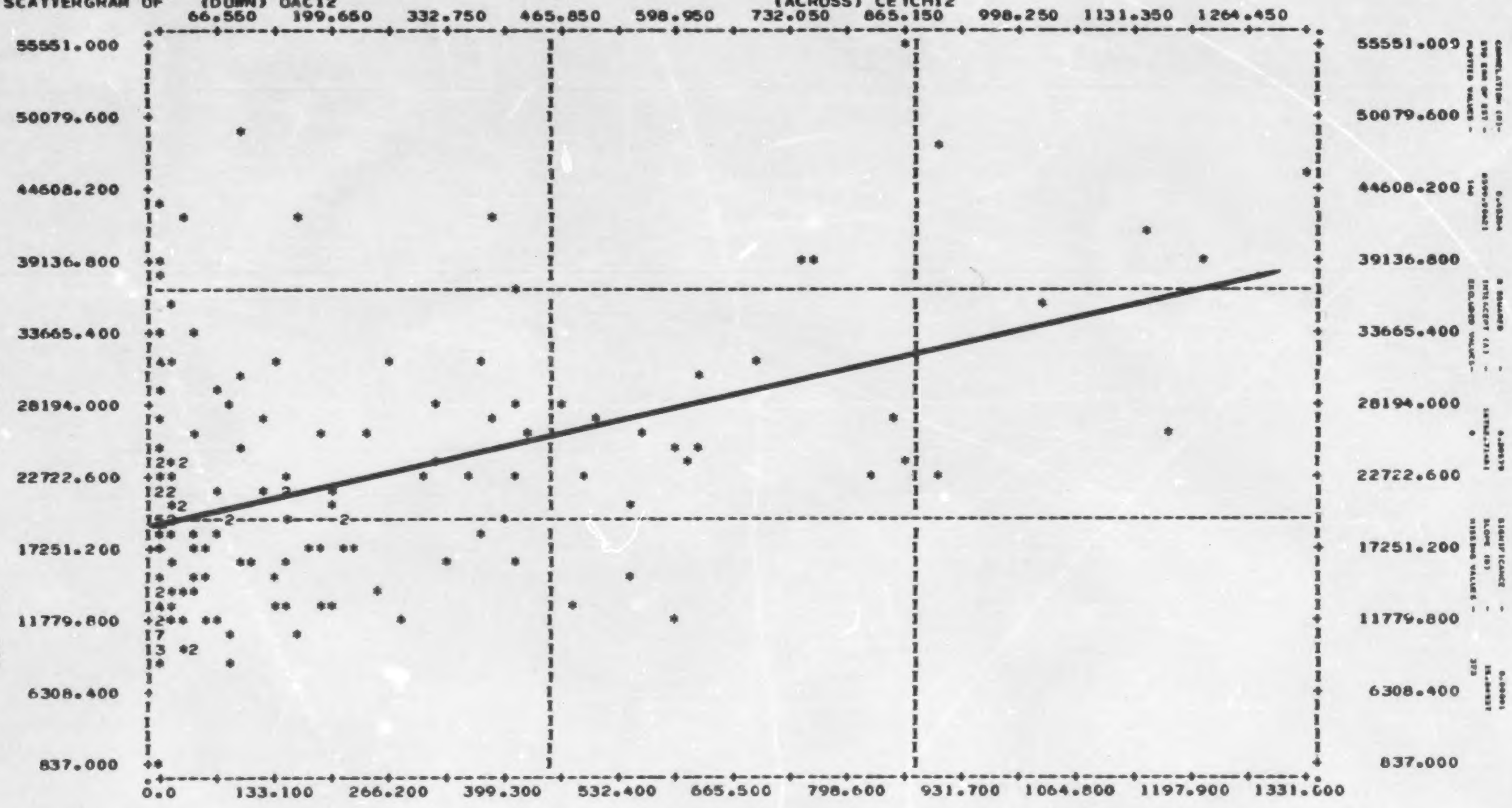

FIGURE 11

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OUTCOME VS CE                                                                    05/09/78        PAGE    8

FILE   ROI       (CREATION DATE = 11/02/77)   CONTINUING EDUCATION -- ENGINEERS
SUBFILE   FORD          NASA          FMC          SYLVANIA
SCATTERGRAM OF   (DOWN) OAC12                                  (ACROSS) CEBUS12
```

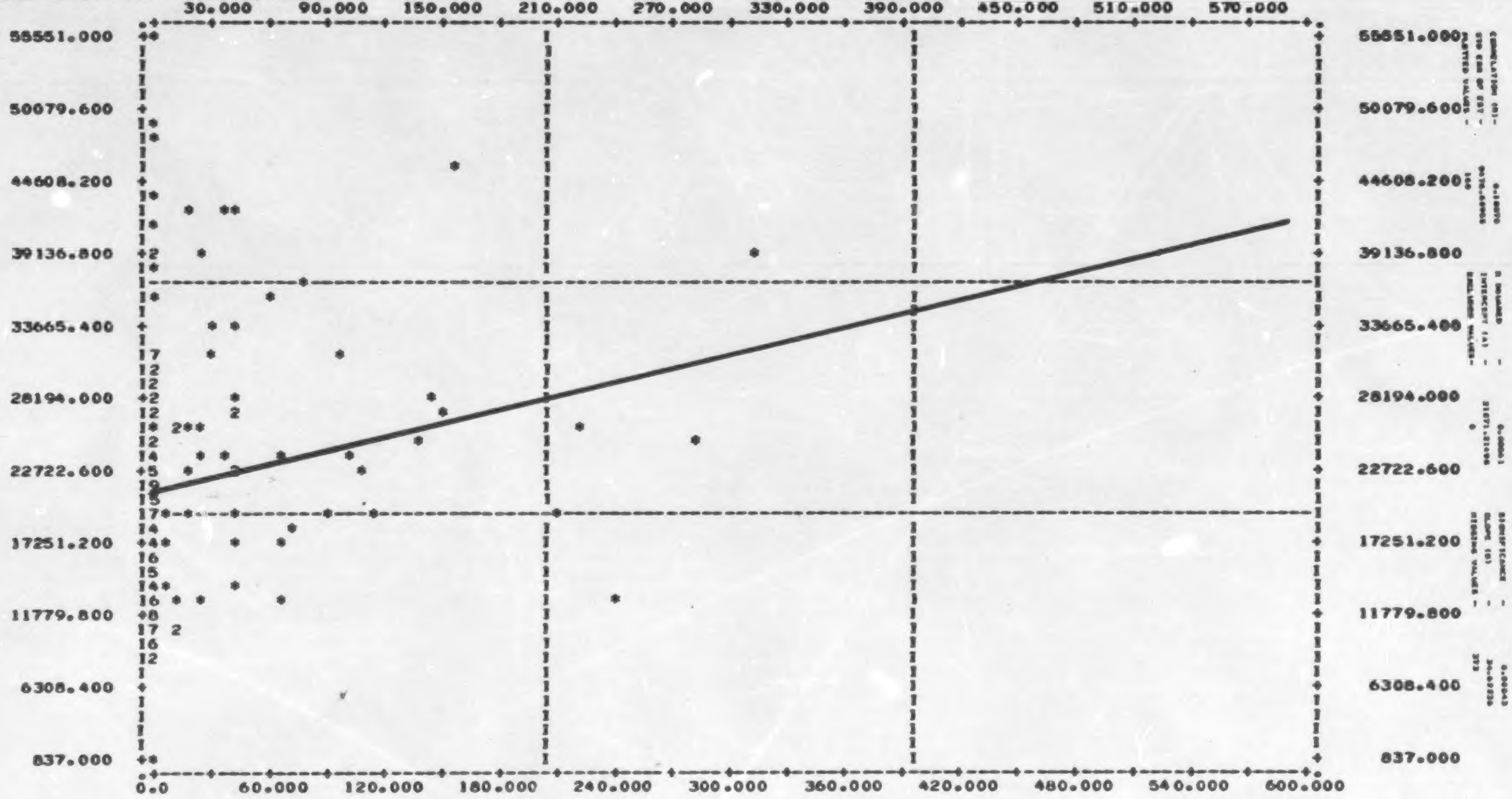

FIGURE 12 Page 36B

B. ORC RELATIVE COMPENSATION

FORD

± CORRELATION RANGE (SAMPLE SIZE RANGE)

ORC - FORD (APPENDIX 5)	CETOT	CETECH	CEBUS	CEOTH	DRIVE
ALL PEOPLE					+0.29 - +0.35 (35 - 36)
M.S.					
NO M.S.					+0.35 - +0.48 (23 - 24)
PH.D.					
LOW SCHOOLS					+0.55 - +0.56 (26 - 28)
TOP SCHOOLS					
LOW GPA	+0.43 - +0.48 (13 - 16)				
MID GPA			-0.71 - +0.56 (11 - 15)	-0.45 - -0.70 (15 - 18)	
HIGH GPA					
HONORS				-0.60 - -0.80 (11 - 16)	
NO HONORS	+0.31 - +0.31 (29 - 35)				+0.37 - +0.41 (20 - 24)
LOW IPR					
MID IPR			-0.65 - +0.94 (4 - 10)		
HIGH IPR				-0.8 - +0.73 (6 - 9)	
LOW IFR	+0.42 - +0.72 (7 - 18)	+0.44 - +0.76 (7 - 18)			
MID IFR					
HIGH IFR					
LOW OCR					
MID OCR					
HIGH OCR					+0.53 - +0.80 (6 - 11)

All People show a weak-moderate positive correlations only with DRIVE. This relationship is only marginally persistent within ability groups. Data filtering (Appendix 21A) provides no useful data improvement.

NASA

± CORRELATION RANGE (SAMPLE SIZE RANGE)

ORC - NASA (APPENDIX 6)	CETOT	CETECH	CEBUS	CEOTH	DRIVE
ALL PEOPLE	+0.38 - +0.52 (35 - 48)	+0.38 - +0.51 (35 - 48)			
M.S.	+0.34 - +0.60 (14 - 32)	+0.44 - +0.59 (14 - 32)			
NO M.S.					
PH.D.	+0.64 - +0.74 (9 - 10)	+0.66 - +0.76 (9 - 10)			
LOW SCHOOLS	+0.42 - +0.50 (26 - 33)	+0.33 - +0.46 (19 - 33)	+0.40 - +0.67 (26 - 33)		-0.38 - -0.38 (23 - 23)
TOP SCHOOLS	+0.46 - +0.64 (14 - 16)				
LOW GPA	+0.55 - +0.60 (13 - 17)	+0.48 - +0.60 (13 - 17)			
MID GPA					
HIGH GPA	+0.57 - +0.71 (11 - 16)	+0.54 - +0.62 (11 - 16)			
HONORS	+0.48 - +0.52 (15 - 21)	+0.46 - +0.48 (17 - 21)	+0.39 - +0.61 (18 - 21)		
NO HONORS	+0.33 - +0.65 (18 - 30)	+0.35 - +0.66 (18 - 30)	+0.32 - +0.45 (27 - 30)		
LOW IPR	+0.65 - +0.87 (6 - 9)				
MID IPR	+0.57 - +0.62 (10 - 10)	+0.52 - +0.62 (10 - 10)			
HIGH IPR	+0.61 - +0.72 (11 - 12)		+0.64 - +0.72 (11 - 12)		
LOW IFR					
MID IFR	+0.48 - +0.59 (13 - 14)				
HIGH IFR					

All People show moderate-strong positive correlations with both CETOT and CETECH. Occasional moderate-strong positive correlations surface with CEBUS within various ability groups. Neither DRIVE nor CEOTH exhibit any significant correlations (except DRIVE within one ability group). Data filtering (Appendix 21C) produces no useful results. Scattergrams showing the relationships between ORC and CETECH in Years 6 and 12 are shown in Figures 13 and 14.

FMC

ORC - FMC

± CORRELATION RANGE (SAMPLE SIZE RANGE)

(APPENDIX 7)	CETOT	CETECH	CEBUS	CEOTH	DRIVE
ALL PEOPLE					
M.S.					+0.70 - +0.83 (7 - 7)
NO M.S.					
PH.D.					
LOW SCHOOLS					
TOP SCHOOLS					
LOW GPA		+0.71 - +0.75 (10 - 13)			
MID GPA					
HIGH GPA					
HONORS					
NO HONORS					
LOW IPR			+0.82 - +0.94 (5 - 6)		
MID IPR					
HIGH IPR					-0.85 - -0.92 (6 - 6)
LOW IFR			+0.86 - +0.96 (4 - 5)		-0.92 - -0.98 (4 - 5)
MID IFR					
HIGH IFR	+0.48 - +0.91 (4 - 13)				
LOW OCR		+0.51 - +0.61 (9 - 13)			+0.88 - +0.88 (7 - 8)
MID OCR	+0.82 - +0.91 (4 - 10)				
HIGH OCR	+0.54 - +0.61 (10 - 11)				

These data show no useful correlations. Data filtering (Appendix 21E) does not change this.

OUTCOME VS CE 05/09/78 PAGE 20

FILE ROI (CREATION DATE = 11/02/77) CONTINUING EDUCATION -- ENGINEERS
SUBFILE NASA
SCATTERGRAM OF (DOWN) ORC06 (ACROSS) CETCH06

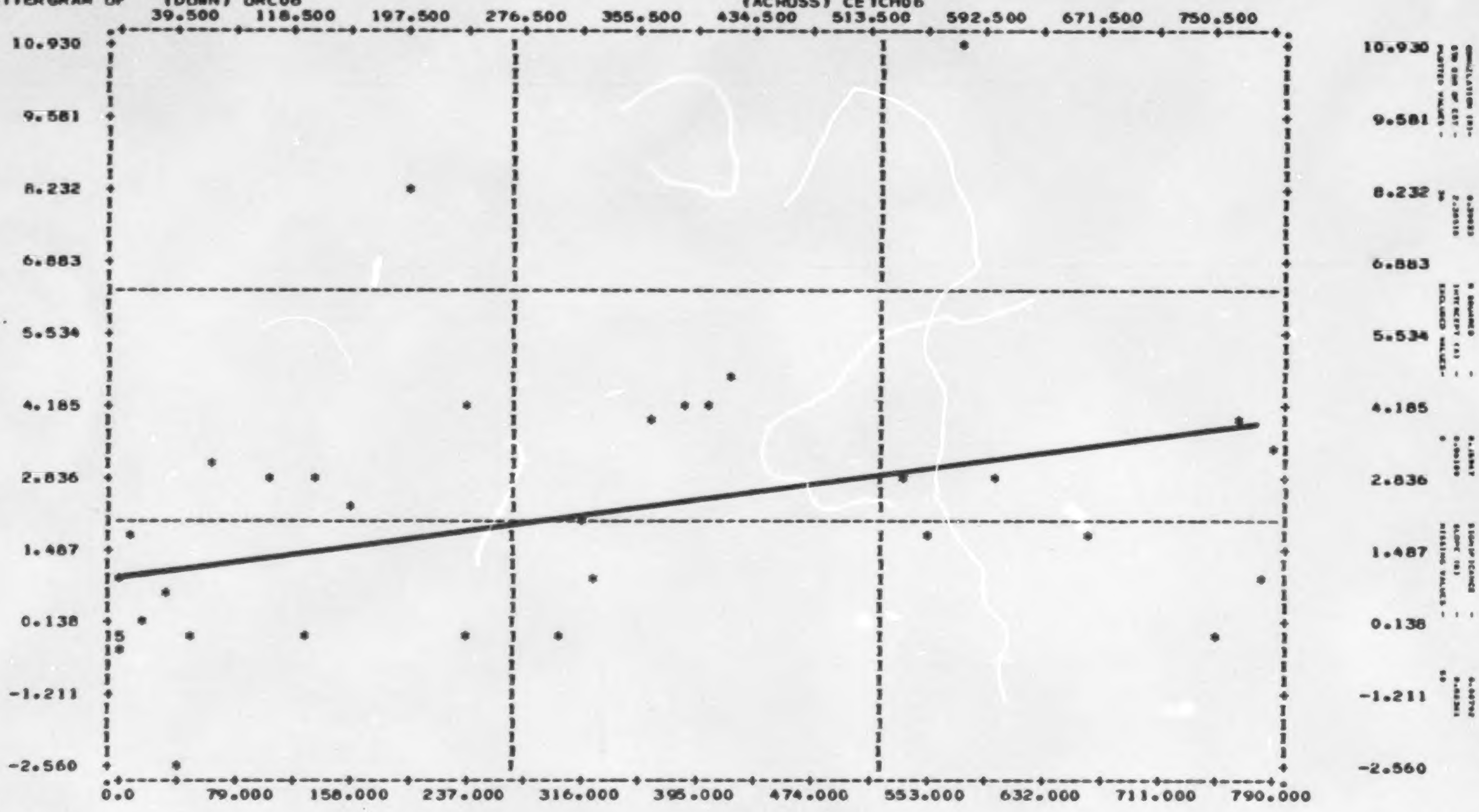

FIGURE 13 Page 38A

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OUTCOME VS CE                                                                      05/09/78        PAGE   22

FILE    ROI        (CREATION DATE = 11/02/77)    CONTINUING EDUCATION -- ENGINEERS
SUBFILE    NASA
SCATTERGRAM OF      (DOWN) ORC12                                  (ACROSS) CETCH12
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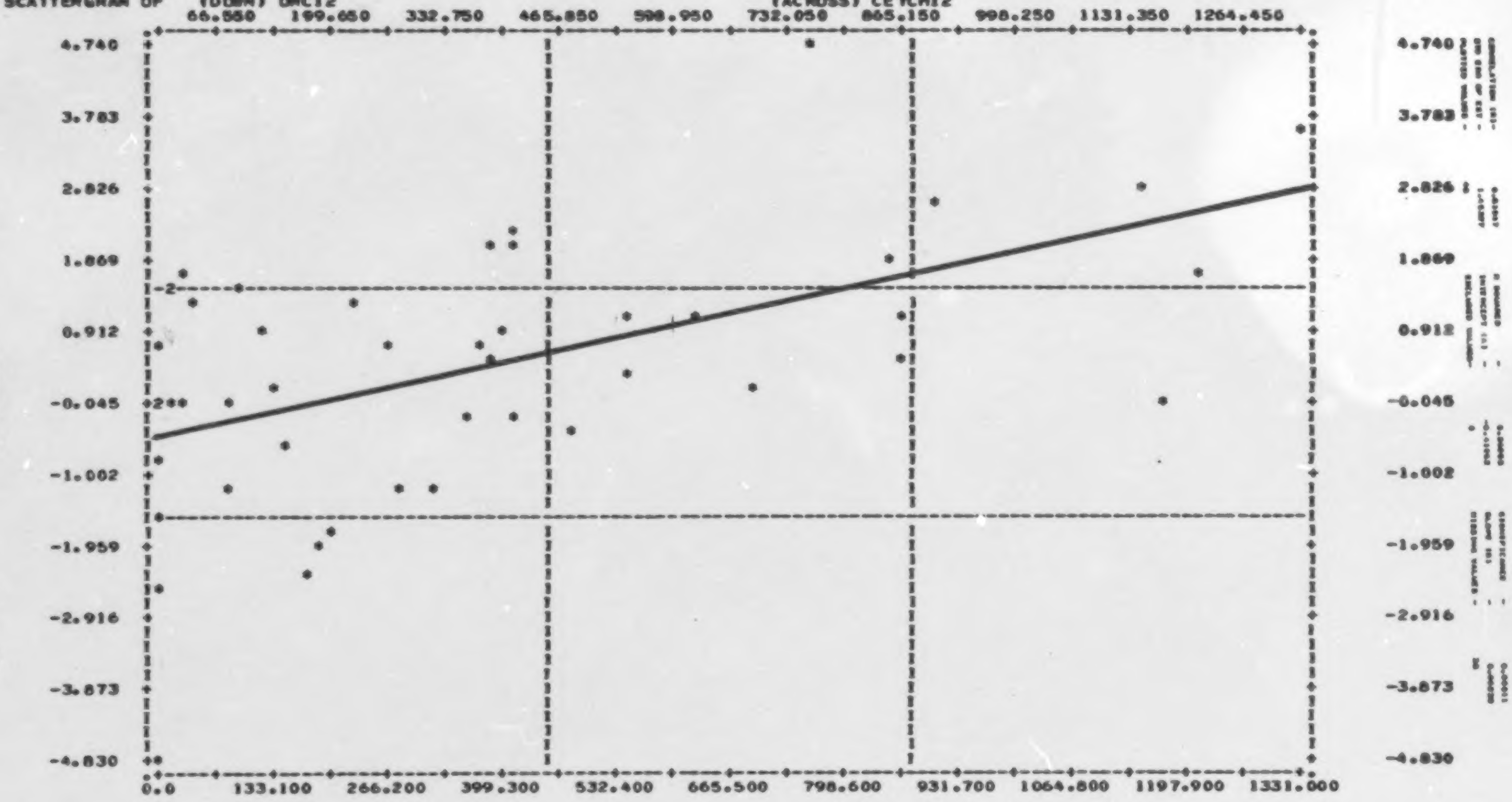

FIGURE 14   Page 38B

SYLVANIA

ORC - SYLVANIA ± CORRELATION RANGE (SAMPLE SIZE RANGE)

(APPENDIX 8)

	CETOT	CETECH	CEBUS	CEOTH	DRIVE
ALL PEOPLE					
M.S.					
NO M.S.					
PH.D.					
LOW SCHOOLS					
TOP SCHOOLS					
LOW GPA	+0.56 - +0.72 (8 - 11)	+0.53 - +0.71 (8 - 11)			
MID GPA					
HIGH GPA	+0.59 - +0.63 (8 - 9)				
HONORS					
NO HONORS	+0.46 - +1.0 (3 - 17)				
LOW IPR					
MID IPR					
HIGH IPR	+0.73 - +0.97 (4 - 9)	+0.64 - +0.97 (4 - 9)			
LOW IFR					
MID IFR					
HIGH IFR					
LOW OCR					
MID OCR					
HIGH OCR	+0.93 - +0.97 (4 - 4)				

These data show no useful correlations. Data filtering (Appendix 21G) does not change this.

ALL COMBINED

ORC - ALL COMBINED ± CORRELATION RANGE (SAMPLE SIZE RANGE)

(APPENDIX 9)

	CETOT	CETECH	CEBUS	CEOTH	DRIVE
ALL PEOPLE	+0.20 - +0.29 (129 - 160)	+0.19 - +0.29 (129 - 160)			
M.S.	+0.14 - +0.28 (66 - 76)	+0.27 - +0.30 (69 - 76)			
NO M.S.	+0.20 - +0.26 (84 - 85)				
PH.D.	+0.53 - +0.61 (13 - 17)	+0.56 - +0.63 (13 - 17)			
LOW SCHOOLS	+0.25 - +0.26 (97 - 102)	+0.18 - +0.25 (97 - 102)	+0.19 - +0.25 (97 - 102)		
TOP SCHOOLS	+0.41 - +0.43 (39 - 46)	+0.44 - +0.50 (13 - 46)			
LOW GPA	+0.36 - +0.47 (47 - 53)	+0.38 - +0.47 (47 - 53)			
MID GPA					
HIGH GPA	+0.35 - +0.35 (43 - 48)	+0.32 - +0.35 (43 - 48)			
HONORS					
NO HONORS	+0.29 - +0.38 (70 - 98)	+0.29 - +0.40 (70 - 98)			
LOW IPR	+0.33 - +0.62 (22 - 40)	+0.35 - +0.62 (22 - 40)		-0.27 - -0.29 (39 - 40)	-0.27 - -0.36 (39 - 40)
MID IPR	+0.36 - +0.47 (23 - 29)	+0.37 - +0.46 (23 - 29)	+0.35 - +0.38 (25 - 28)	+0.34 - +0.43 (24 - 29)	
HIGH IPR					
LOW IFR	+0.30 - +0.39 (25 - 39)	+0.28 - +0.55 (16 - 39)	+0.29 - +0.42 (25 - 29)		
MID IFR	+0.32 - +0.40 (35 - 40)	+0.28 - +0.41 (37 - 40)			
HIGH IFR	+0.34 - +0.42 (21 - 30)	+0.34 - +0.39 (21 - 30)			
LOW OCR					+0.24 - +0.36 (50 - 50)
MID OCR	+0.39 - +0.64 (14 - 20)	+0.43 - +0.46 (14 - 20)			
HIGH OCR					

All People show weak-moderate positive correlations with both CETOT and CETECH. These persist strongly within various ability groups. While there are occasional correlations shown with CEBUS, it appears that CETECH is the dominant contributor to positive correlations with CETOT. These results are particularly interesting because of the separate organizations, only NASA showed significant correlations between ORC and CETOT/CETECH for All People. While NASA is clearly a strong contributor to the results for All Combined, it is obviously not the only contributor since the sample sizes for the All Combined data are much larger than the NASA only sample sizes.

Scattergrams of the relationship between ORC and CETECH in Years 6 and 12 are shown in Figures 15 and 16.

SUMMARY OF ORC RELATIONSHIPS

It is apparent that only NASA (as a separate organization) shows strong patterns of positive relationships with CE - primarily with CETECH. None of the other organizations show much useful data except for the Ford pattern with DRIVE. When combined, the overall pattern is similar to but less strongly correlated than the NASA pattern. Nevertheless, for the patterns shown for All Combined to exist, all organizations must contribute to the correlated data.

Why are the NASA results so strong here and the results of the others so marginal? The ORC results are penalized by the average percentage increase in salaries each year being derived only from data provided by participating engineers and not from all engineers in each organization. They are further penalized by a contraction in scale in later years, as engineering salary growth tends to flatten off--which means salaries can increase but percentage increases get smaller. However, these problems affect NASA also and yet their results still came through strong. It should be noted that NASA data show significant positive relationships between CEBUS and absolute compensation. These do not survive the comparison with relative compensation shown by CETECH. Why is that? No logical explanation is apparent.

One would expect that, in a government laboratory constrained by Civil Service regulations, the relative compensation differences would be smaller than in industry and the measurable effects would be smaller. The opposite seems to be the case. It would be nice to find out why. It should be noted that none of the inherent ability variables correlate well with ORC either (see Appendix 4A).

```
OUTCOME VS CE                                                              05/09/78        PAGE    4

FILE   ROI        (CREATION DATE = 11/02/77)    CONTINUING EDUCATION -- ENGINEERS
SUBFILE    FORD        NASA          FMC          SYLVANIA
SCATTERGRAM OF    (DOWN) ORC06                                 (ACROSS) CETCH06
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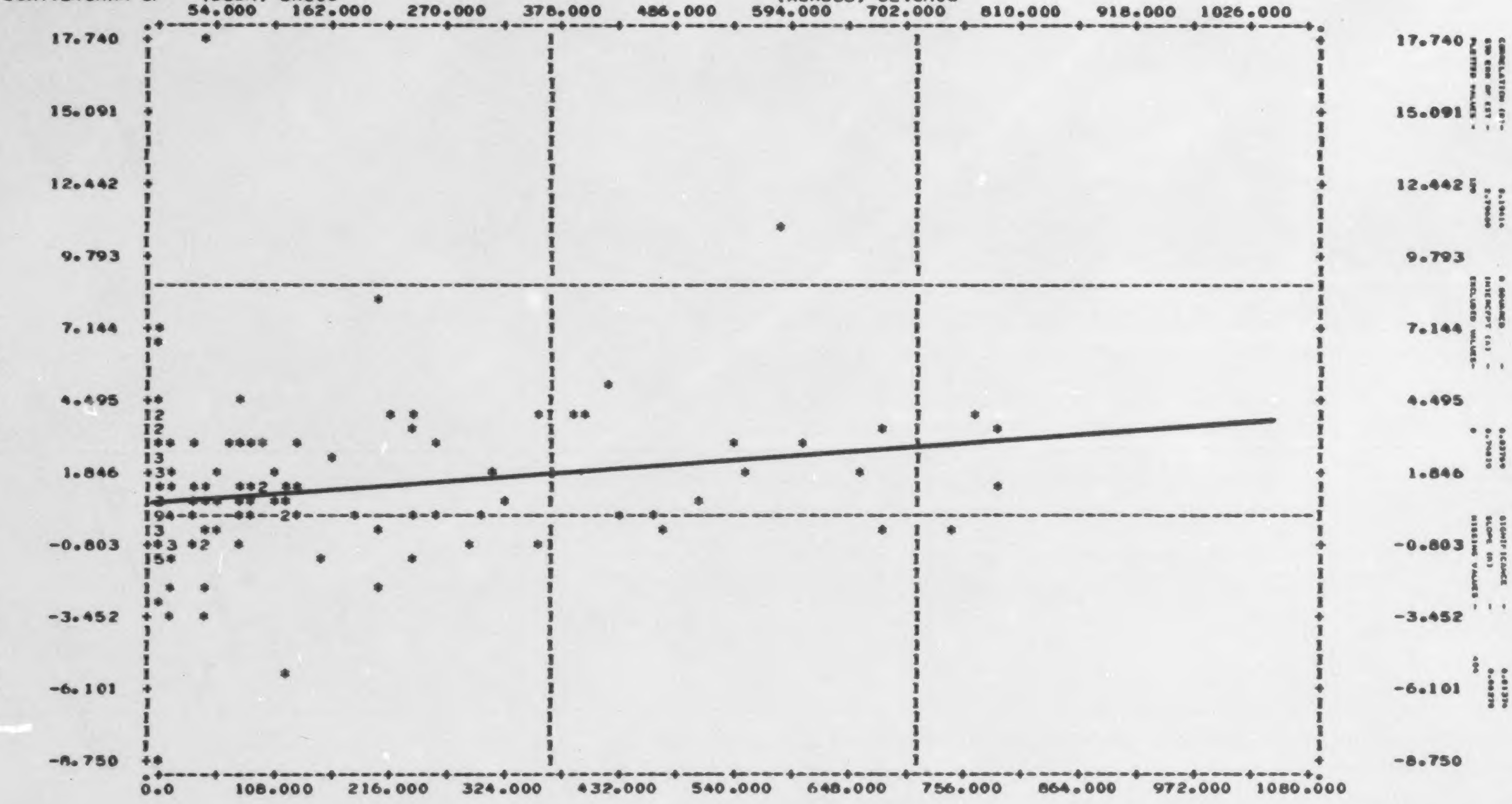

FIGURE 15

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OUTCOME VS CE                                                                                05/09/78        PAGE    6

FILE    ROI       (CREATION DATE = 11/02/77)    CONTINUING EDUCATION -- ENGINEERS
SUBFILE    FORD         NASA          FMC           SYLVANIA
SCATTERGRAM OF     (DOWN) ORC12                                 (ACROSS) CETCH12
```

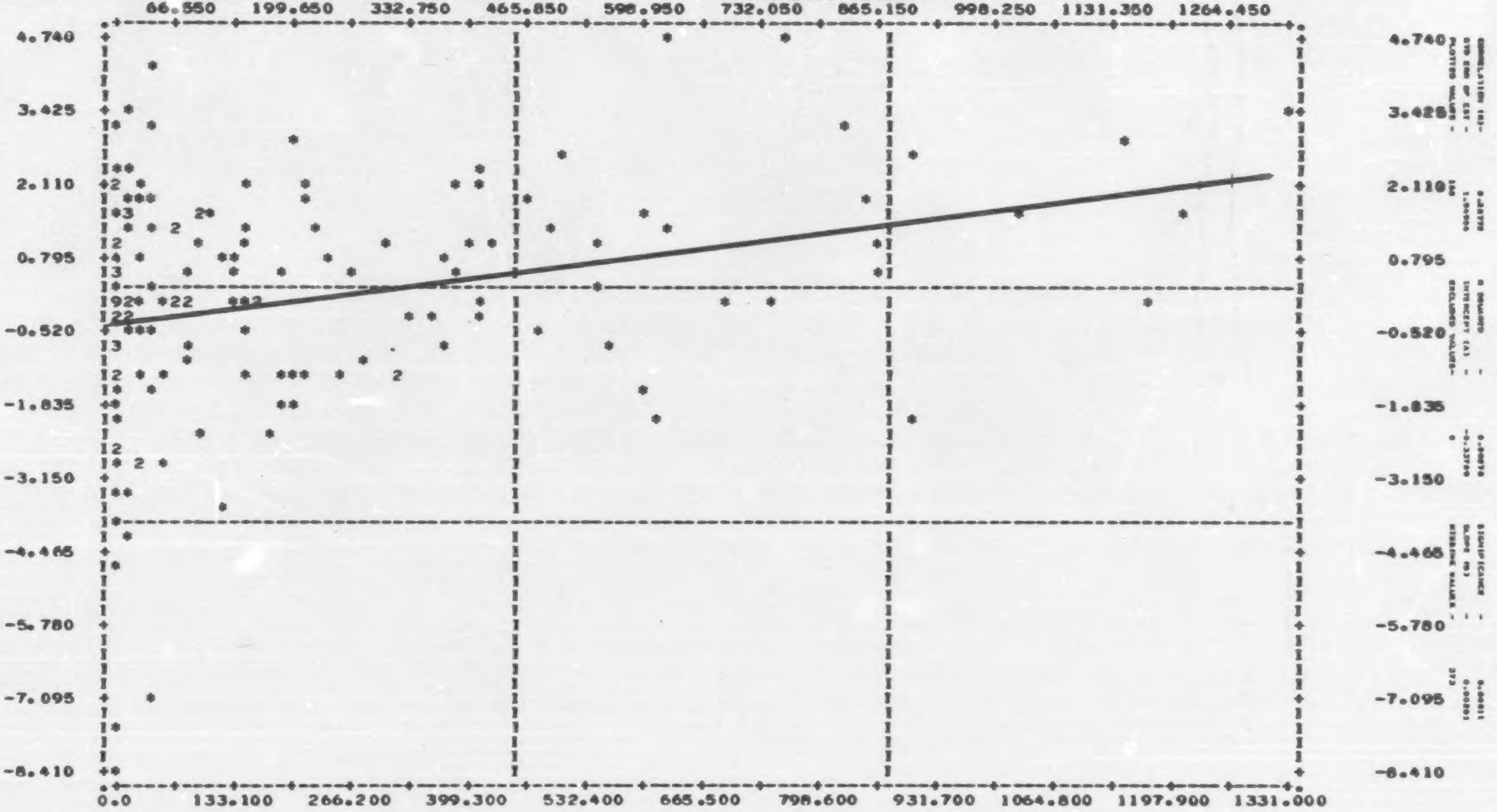

FIGURE 16

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C. OSP (NUMBER OF PERSONS SUPERVISED)

FORD

OSP - FORD (APPENDIX 5)

± CORRELATION RANGE (SAMPLE SIZE RANGE)

	CETOT	CETECH	CEBUS	CEOTH	DRIVE
ALL PEOPLE					
M.S.					
NO M.S.					
PH.D.					
LOW SCHOOLS					
TOP SCHOOLS					
LOW GPA					
MID GPA					
HIGH GPA					
HONORS					
NO HONORS					
LOW IPR					
MID IPR					-0.74 - +0.56 (10 - 12)
HIGH IPR			+0.57 - +0.60 (10 - 11)		
LOW IFR					
MID IFR			+0.50 - +0.73 (6 - 13)	+0.56 - +0.87 (10 - 13)	-0.67 - -0.60 (9 - 11)
HIGH IFR					
LOW OCR				+0.97 - +0.99 (7 - 12)	
MID OCR					
HIGH OCR					

These data show no useful results. Data filtering (Appendix 21B) doesn't change this. However, the basic data show CETECH consistently negatively correlated within all ability groups. It is surprising that DRIVE doesn't show up more consistently.

NASA

OSP - NASA (APPENDIX 6)

± CORRELATION RANGE (SAMPLE SIZE RANGE)

	CETOT	CETECH	CEBUS	CEOTH	DRIVE
ALL PEOPLE					
M.S.		-0.35 - +0.30 (26 - 33)			
NO M.S.					
PH.D.			+0.80 - +0.91 (8 - 12)		
LOW SCHOOLS					
TOP SCHOOLS					
LOW GPA					
MID GPA					
HIGH GPA			+0.49 - +0.68 (8 - 19)		
HONORS					
NO HONORS					
LOW IPR					
MID IPR					
HIGH IPR					
LOW IFR					
MID IFR					
HIGH IFR					
LOW OCR					
MID OCR					
HIGH OCR					

These data show no pattern. Data filtering (Appendix 21D) results in a strong positive relationship with CEBUS for All People when the 300 hours of CETECH threshold is reached. The basic data show CETECH to be persistently negatively correlated in all sub-groups. DRIVE shows no significant relationships.

FMC

OSP - FMC ± CORRELATION RANGE (SAMPLE SIZE RANGE)

(APPENDIX 7)	CETOT	CETECH	CEBUS	CEOTH	DRI.:
ALL PEOPLE			+0.27 - +0.32 (43 - 47)		
M.S.					
NO M.S.			+0.45 - +0.67 (32 - 34)		
PH.D.					
LOW SCHOOLS					
TOP SCHOOLS					
LOW GPA					
MID GPA					
HIGH GPA					
HONORS					
NO HONORS			+0.52 - +0.66 (27 - 31)		
LOW IPR			+0.67 - +0.84 (8 - 9)	+0.89 - +0.98 (8 - 9)	+0.70 - +0.86 (8 - 8)
MID IPR					
HIGH IPR					
LOW IFR					
MID IFR			+0.54 - +0.71 (15 - 15)	+0.48 - +0.69 (15 - 15)	
HIGH IFR			+0.64 - +0.99 (9 - 12)		
LOW OCR	+0.65 - +0.66 (16 - 20)		+0.67 - +0.90 (16 - 22)		
MID OCR					
HIGH OCR			+0.52 - +0.76 (12 - 12)		

All People show a moderate positive correlation with CEBUS which persists marginally within a number of ability groups. A scattergram showing the relationship with CEBUS in Year 12 is shown in Figure 17. Applying data filtering (Appendix 21F) shows a complete loss of correlation patterns at all levels of filtering. CETECH is persistently negatively correlated in all sub-groups. DRIVE is again negligibly important.

OUTCOME VS CE 05/09/78 PAGE 35

FILE ROI (CREATION DATE = 11/02/77) CONTINUING EDUCATION -- ENGINEERS
SUBFILE FMC
SCATTERGRAM OF (DOWN) OSP12 (ACROSS) CEBUS12

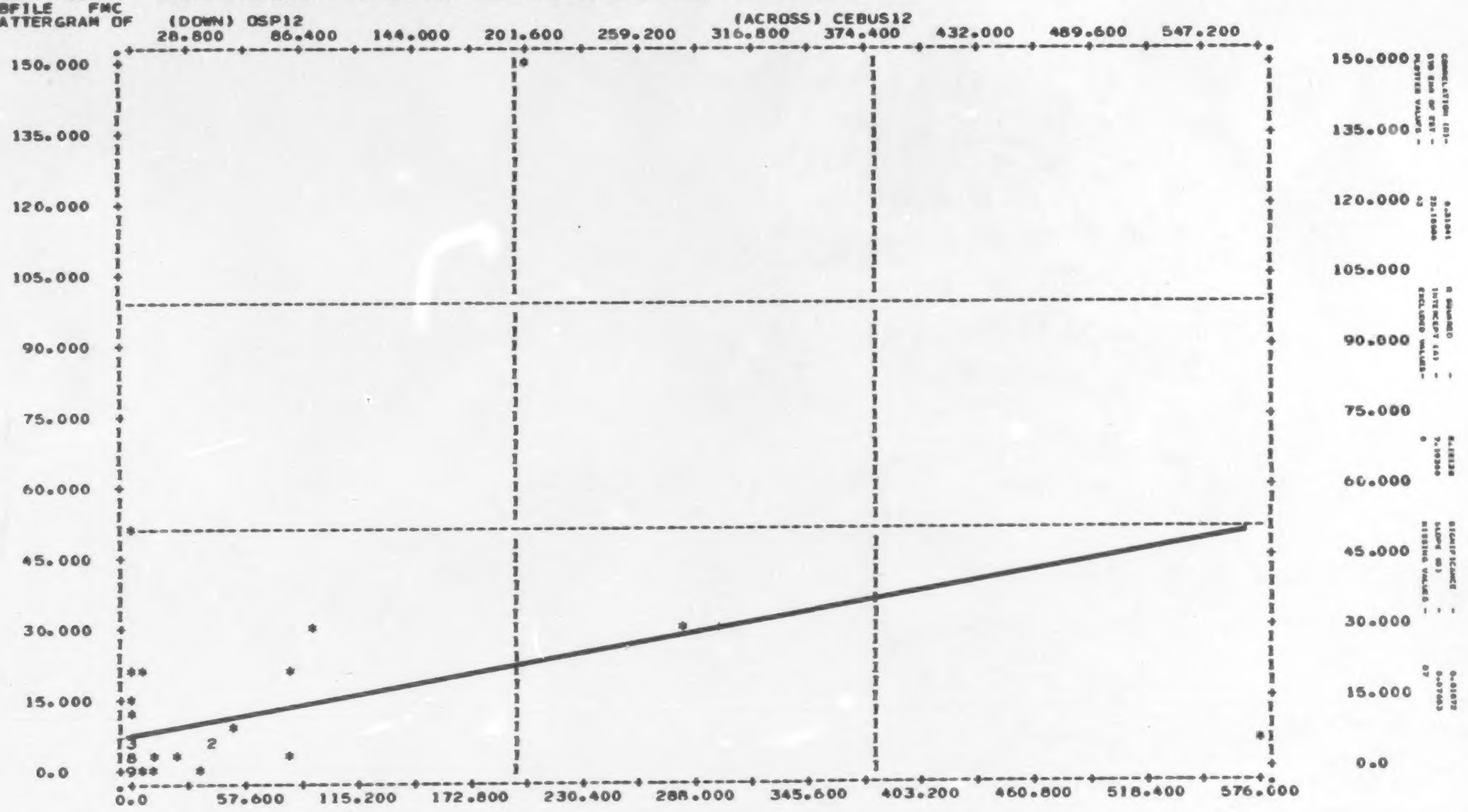

FIGURE 17 Page 42A

SYLVANIA

OSP - SYLVANIA ± CORRELATION RANGE (SAMPLE SIZE RANGE)

(APPENDIX 8)	CETOT	CETECH	CEBUS	CEOTH	DRIVE
ALL PEOPLE			+0.38 - +0.72 (39 - 42)		
M.S.			+0.47 - +0.86 (22 - 24)		
NO M.S.			+0.48 - +0.66 (16 - 18)		
PH.D.					
LOW SCHOOLS			+0.59 - +0.81 (25 - 25)		
TOP SCHOOLS			+0.52 - +0.57 (16 - 17)		
LOW GPA			+0.47 - +0.70 (15 - 18)		-0.68 - -0.54 (8 - 1[illegible])
MID GPA					
HIGH GPA			+0.50 - +0.98 (11 - 13)		
HONORS			+0.82 - +0.95 (16 - 17)		
NO HONORS			+0.52 - +0.52 (25 - 26)		-0.68 - -0.45 (8 - 1[illegible])
LOW IPR					
MID IPR					
HIGH IPR			+0.59 - +0.83 (11 - 11)		
LOW IFR					
MID IFR					
HIGH IFR			+0.95 - +1.00 (3 - 5)		
LOW OCR			+0.44 - +0.72 (32 - 35)		-0.62 - -0.48 (12 - 20)
MID OCR					
HIGH OCR			+1.0 - +1.0 (3 - 3)		

All People show moderate-strong positive correlations with CEBUS which are as persistent within ability groups as any relationships shown in the Study. A scattergram showing the relationship with CEBUS in Year 12 is shown in Figure 18. There is also a significant persistent pattern of negative relationships shown with CETECH in the basic data. DRIVE is unimportant.

Data filtering (Appendix 21H) produces the following results:

± CORRELATION RANGE (SAMPLE SIZE RANGE)

	WITHOUT FILTERING	NOT COUNTING 0 CETECH HRS	NOT COUNTING LESS THAN 100 CETECH HRS	NOT COUNTING LESS THAN 200 CETECH HRS	NOT COUNTING LESS THAN 300 CETECH HRS
CETECH	---	---	---	---	---
CEBUS	+0.38 - +0.72 (35-42)	+0.45 - +0.81 (20-30)	+0.62 - +0.84 (10-17)	+0.84 - +0.51 (10-12)	---

Correlations with CEBUS continue to get ever stronger up to the threshold level of 300 hours of CETECH.

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OUTCOME VS CE                                                                05/09/78        PAGE   42

FILE   ROI      (CREATION DATE = 11/02/77)   CONTINUING EDUCATION -- ENGINEERS
SUBFILE    SYLVANIA
SCATTERGRAM OF    (DOWN) OSP12                               (ACROSS) CEBUS12
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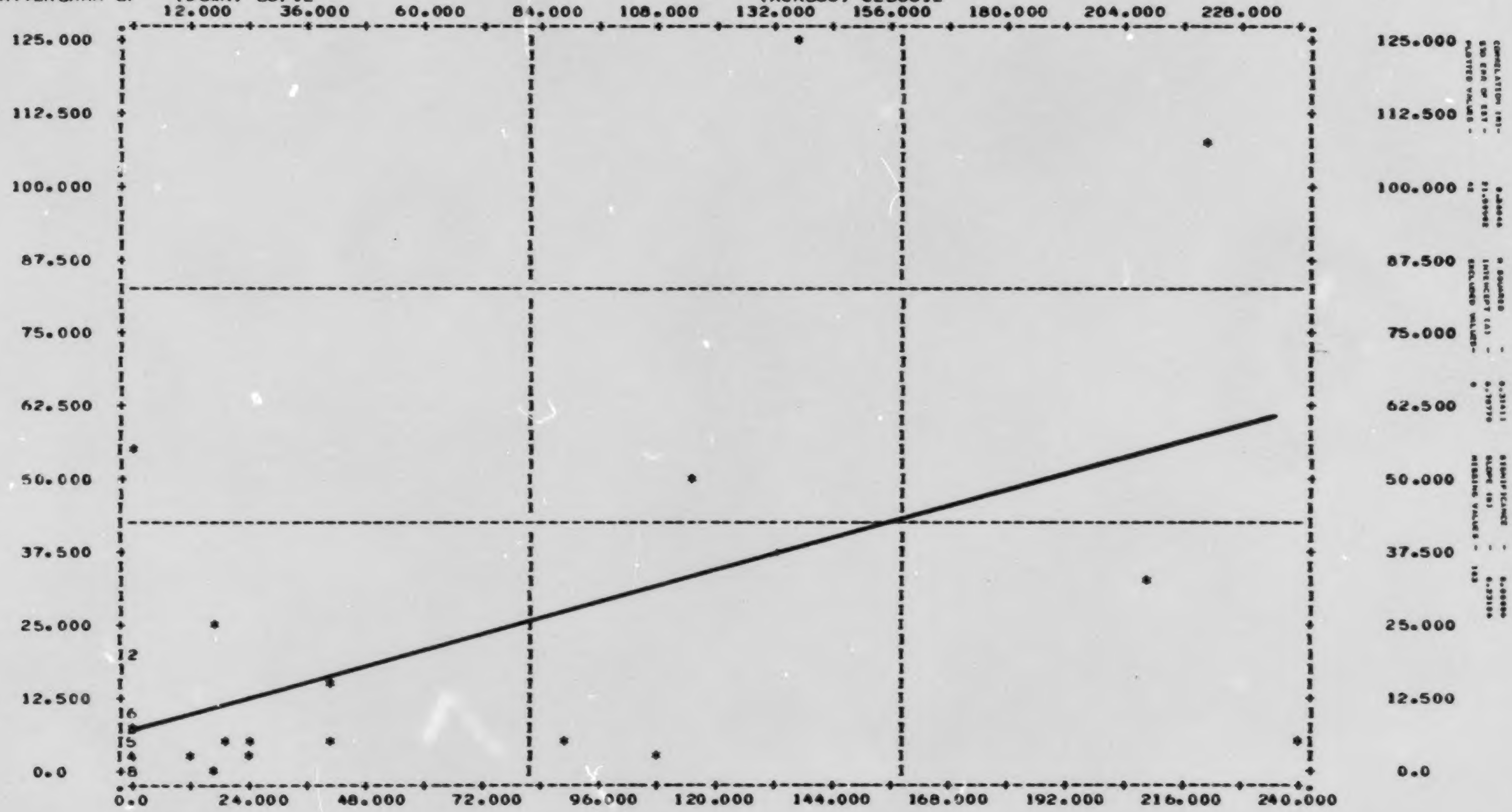

FIGURE 18

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ALL COMBINED

OSP - ALL COMBINED ± CORRELATION RANGE (SAMPLE SIZE RANGE)

(APPENDIX 9)

	CETOT	CETECH	CEBUS	CEOTH	DRI.
ALL PEOPLE	-0.14 - -0.18 (160 - 190)				+0.16 - +0.17 (136 - 141)
M.S.		-0.18 - -0.19 (90 - 98)			
NO M.S.					
PH.D.			+0.58 - +0.89 (11 - 22)		
LOW SCHOOLS					
TOP SCHOOLS			+0.24 - +0.39 (55 - 65)		
LOW GPA			+0.24 - +0.29 (51 - 67)		
MID GPA					
HIGH GPA					
HONORS					
NO HONORS					
LOW IPR					
MID IPR					-0.29 - +0.42 (27 - 35)
HIGH IPR					
LOW IFR					
MID IFR					
HIGH IFR					
LOW OCR			+0.18 - +0.22 (90 - 92)		+0.28 - +0.33 (58 - 63)
MID OCR					
HIGH OCR					-0.36 - +0.38 (21 - 31)

The data for All People Combined are not very useful. There is no persistence within ability groups. Clearly, correlations with the responsibility variable OSP does not survive the diversity between groups.

SUMMARY OF OSP RELATIONSHIPS

Both Sylvania and FMC (particularly Sylvania) show significant patterns of positive correlations between OSP and CEBUS, correlations which persist within ability groups. Data filtering improves the Sylvania correlations markedly, whereas in the other groups, the data filtering effect is negative--if anything. Surprisingly, all data indicate patterns of negative correlations between OSP and CETECH. DRIVE is not an important factor.

The Ford and NASA data do not show significant relationships between CEBUS and OSP. This difference does not relate to levels of participation in CEBUS. At NASA, the nature of the organization may lead to a reward system much more strongly oriented to technical rather than management as the preferred growth path. But, why is Ford different?

D. CORRELATIONS AS FUNCTION OF AMOUNT OF CE PARTICIPATION

It was hypothesized in the preceding Section of this Report that if CE is important, then one ought to see stronger correlations, or at least more correlations of significance, if average levels of CE participation are significantly different. The following shows the actual results:

FORD - (MS average participation in CE much higher than No-MS participation in CE). Referring to Appendices 5B and 5C, neither the MS nor the No-MS groups show a useful pattern of correlations between CE and OAC. The MS group shows a clear pattern of moderate negative correlations between CEOTH and OCR, a pattern not exhibited by the No-MS group. This tends to support the hypothesis - even though the correlations are negative.

NASA - (MS and Ph.D. average participation in CE much higher than No-MS participation in CE and Low and High GPA groups average participation in CE much higher than Mid GPA group). Referring to Appendices 6B, 6C, 6D, more strong correlations for both the MS and Ph.D. groups are shown as compared to the No-MS group. Similarly, referring to Appendices 6G, 6H, 6I, while the Mid GPA group shows strong correlations between CETOT/CETECH/CEBUS and OAC, the Low GPA group shows these plus strong correlations with ORC and the High GPA group shows the same as the Low GPA group plus strong correlations between CEBUS and OSP/ORC. These data again tend to support the hypothesis.

FMC - (CEOTH average participation higher than in other organizations). The data in Appendix 7 do not seem to show significant correlation differences between FMC and other organizations and the hypothesis is not supported here.

SYLVANIA - (Ph.D. average participation higher than MS participation and MS higher than No-MS. Also Low and Mid GPA groups reported higher average participation than High GPA group.) From Appendix 8, the No-MS group shows more correlations with primary outcome variables than either the Ph.D. or MS groups and this negates the hypothesis. The Low GPA group does show more correlations than the High GPA group (which agrees with hypothesis) but the Mid GPA group shows less. These data as a whole do not support the hypothesis.

SUMMARY -

While there is some support for the hypothesis that significant differences in average levels of CE participation will result in more highly correlated results, some of the data do not support this and a clear conclusion is not possible.

However, multiple correlation results reported in Section VII of this Report show correlations with Credit CE, Not-At-Employers, and with Non-Academic instructors to be very much stronger than correlations with Credit CE, At-Employers and with Academic Instructors. This coincides with widely disparate levels of participation between the different groups and tends to support the hypothesis.

E. COMPARING PEOPLE WITH MS BEFORE TEMPLY WITH THOSE WITH MS AFTER-TEMPLY

The timing of receipt of an MS degree may be significant. Thompson, Dalton and Kopelman(3) show that people who receive their MS degrees at a younger age had much higher performance ratings, salaries and job complexity ratings, at least between the ages of 20-29 and 35 and over. The 30-34 age bracket of people showed a trend reversal in terms of performance ratings and job complexity ratings (but not in salary).

Most of the people who receive their MS degrees while still full-time students are in the 20-25 age bracket (Before-TEMPLY). With an MS degree, these people are hired at higher starting salaries than people with BS degrees. The After-TEMPLY people are likely to be in the age 25+ age bracket.

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(3) Ibid

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It was thought desirable to use the data obtained from this Study to attempt to verify findings previously reported relative to timing of receipt of the MS degree. To do this it was decided to look at data only for all people combined and not to look at each organization separately.

Appendix 3C shows that about twice as many engineers received their MS After-TEMPLY as Before-TEMPLY. Appendix 3P shows the participation in both CETECH and CEBUS by organization and for all engineers combined for both the MS groups. It is apparent from this Appendix that average participation in CETECH for the After-TEMPLY group exceeded that of the Before-TEMPLY group by about 50%. Average participation in CEBUS by both groups is about equal for the first three reporting years but is higher for the After-TEMPLY group in the last three reporting years. For both MS groups, participation in CETECH exceeded participation in CEBUS by ratios ranging from about (2-10):1.

Appendices 9U and 9V show the bi-variate correlations of both groups between CE and DRIVE variables and OAC, ORC, OSP, OCR, OCT and OCM. The following summarizes these data:

± CORRELATION RANGE (SAMPLE SIZE RANGE)

	CETOT	CETECH	CEBUS	CEOTH	DRIVE
OAC					
(M.S. Before TEMPLY)	+0.42 - +0.56 (14-19	+0.42 - +0.54 (15-19)	---	+0.36 - +0.59 (21-22)	---
(M.S. After TEMPLY)	+0.32 - +0.62 (45-59)	+0.26 - +0.61 (45-59)	+0.23 - +0.52 (45-58)	---	+0.26 - +0.32 (45-50)
ORC					
(M.S. Before TEMPLY)	---	---	---	---	---
(M.S. After TEMPLY)	+0.25 - +0.45 (19-59)	+0.25 - +0.44 (19-53)	---	---	---
OSP					
(M.S. Before TEMPLY)	---	-0.33 - -0.37 (21-27)	---	---	---
(M.S. After TEMPLY)	---	-0.21 - -0.21 (66-71)	---	---	---
OCR					
(M.S. Before TEMPLY)	---	---	---	-0.5 - -0.6 (17-17)	+0.45 - +0.45 (17-17)
(M.S. After TEMPLY)	---	---	---	-0.29 - -0.32 (38-38)	---
OCT					
(M.S. Before TEMPLY	---	---	---	+0.40 - +0.74 (21-24)	---
(M.S. After TEMPLY)	---	---	---	---	---
OCM					
(M.S. Before TEMPLY)	+0.22 - +0.41 (21-23)	+0.41 - +0.43 (21-23)	---	---	---
(M.S. After TEMPLY)	---	---	-0.23 - -0.38 (54-70)	---	---

The absolute compensation (OAC) pattern for both MS groups shows both positively and strongly correlating OAC with CETOT and CETECH. However, the After-TEMPLY group shows moderate-strong positive correlations with CEBUS--perhaps reflecting their greater participation in CEBUS in later years. The Before-TEMPLY group shows moderate-strong positive correlations with CEOTH. This may be because they take more CEOTH in the early years--a period when the After-TEMPLY group is concentrating on CETECH and CEBUS.

The relative compensation (ORC) pattern for the After-TEMPLY group shows moderate positive correlations with both CETOT and CETECH. This pattern holds for years 3 through 12, a period during which the After-TEMPLY people may overcome the initial salary differentials relative to the Before-TEMPLY people.

Both MS groups show a pattern of negative correlations between OSP and CETECH. This pattern agrees with results previously seen.

The variables OCR, OCT and OCM yield mixed results. However, the negative patterns relating CETECH with OCT and CEBUS with OCM seem to persist.

It is difficult to compare these results directly with the conclusions of (3). However, there is evidence that the people who take a lot of CETECH, as part of the After-TEMPLY group, are being advanced at higher rates of change of compensation than people in the Before-TEMPLY group. Therefore, the generalization that the later an engineer receives the MS degree the less his compensation, etc. may be misleading. It may hold for the average of all engineers but it might not be true for engineers who participate in a lot of CETECH and CEBUS.

F. CETECH CEBUS VS. OAC AND OSP - UNIQUE GROUPS OF PEOPLE - APPENDIX 9W

The bi-variate correlations presented in Appendices 5 through 9W are for years 3-18. As previously indicated, while the data in each of these years are different, many of the same people appear in more than one year and so the data for each year are not truly independent. Appendix 9W shows bi-variate correlation data for each organization separately and for all combined based on unique groups of people. Starting with year 18, all people were included in the data sample as before. Therefore, the year 18 data duplicate previous year 18 data. However, included in year 15 data are only those people who are not in the data for year 18. Similarly, in each earlier period down to year 6, each period only includes people not included in a later year. Therefore, each year now represents a unique group of people. In this case, a pattern of significance need not be required but each year must--in itself--be statistically significant.

While the data shown in Appendix 9W include those for each organization separately, only the data for all combined will be discussed since the sample sizes prior to year 18 for each separate organization are now quite small. What is tabulated below is a reproduction of the original data for all combined from Appendix 9A, compared to data on unique groups of people (all combined) derived from Appendix 9W:

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(3) Ibid

	OAC06	OAC09	OAC12	OAC15	OAC18
Original CETECH Data	-0.0593 (129) S=0.252	0.2501 (145) S=0.001	0.4536 (160) S=0.001	0.3243 (158) S=0.001	0.3355 (134) S=0.001
Unique Groups	-0.1883 (27) S=0.173	0.1843 (23) S=0.200	0.3938 (34) S=0.011	0.2100 (46) S=0.081	0.3343 (130) S=0.001
Original CEBUS Data	0.1734 (129) S=0.025	0.2514 (145) S=0.001	0.1887 (160) S=0.008	0.2606 (158) S=0.001	0.3563 (134) S=0.001
Unique Groups	-0.0558 (27) S=0.391	0.3581 (23) S=0.047	0.1598 (34) S=0.183	0.0133 (46) S=0.465	0.3531 (130) S=0.001

	OSP06	OSP09	OSP12	OSP15	OSP18
Original CETECH Data	-0.1780 (190) S=0.007	-0.0677 (188) S=0.178	-0.0301 (206) S=0.334	-0.0667 (201) S=0.173	-0.0624 (169) S=0.210
Unique Groups	-0.1381 (27) S=0.246	-0.1187 (23) S=0.295	0.4011 (34) S=0.009	-0.1360 (46) S=0.184	-0.0530 (130) S=0.275
Original CEBUS Data	-0.0097 (190) S=0.447	0.0329 (188) S=0.327	0.0843 (206) S=0.114	0.0112 (201) S=0.438	0.1111 (169) S=0.075
Unique Groups	0.1325 (27) S=0.255	0.5491 (23) S=0.003	0.3085 (34) S=0.038	-0.1034 (46) S=0.247	0.0909 (130) S=0.152

The first thing to notice is the very large reduction in sample size when going to unique groups of people. This reduction becomes greater the earlier the year.

Now, referring to OAC vs. CETECH, the unique groups show correlations of significance in Years 12 and 18 as compared to a pattern for the original group. The OAC vs. CEBUS data for the unique groups show correlations in Years 9 and 18 as compared to a pattern for the original group. The OSP vs. CETECH data show no useful correlations for the original group but the unique groups show one significant positive correlation (year 12). The OSP vs. CEBUS relationship shows no pattern of correlations for the original group but two moderate-strong positive correlations of significance for the unique groups (year 9, 12).

What can be deduced from this? By dealing with unique groups of people, complete independence is achieved--but at a price. The price is significant reduction in sample size (which is a severe penalty) and loss of ability to see a "pattern"; a pattern determined by the same people in two different years persisting in behaviour relative to CE. This results in different data points but nevertheless enables establishment of a trend.

Another approach might have been to take unique groups of people and track them from year to year. This would have further fragmented the sample size and the results obtained might hold for one group but not for another.

The net of this is that the approach taken, one which requires statistical significance to be shown in at least two of the six years analyzed, is designed to minimize the effects of lack of true independence between sample groups in different years.

2. Secondary Outcome Variables

A. OPT (PATENTS) and OPB (PUBLICATIONS) - APPENDICES 9X, 9Y - Only All People in each organization, without breakdown into ability groups, are covered by the following:

FORD - The bi-variate data (Appendix 9X) show weak positive (R = 0.28) correlations between CETOT and OPT and moderate positive correlations (R = 0.33) between CETOT and OPB.

NASA - The bi-variate data (Appendix 9X) show moderate positive correlations between OPB and DRIVE (R = 0.4)

FMC - No pattern of significance shown.

SYLVANIA - No pattern of significance shown.

SUMMARY OF OPT/OPB RELATIONSHIPS -

As expected, neither CEBUS or CEOTH seem in any way to be related to the production of patents or publications. There seems to be some evidence that CE participation is positively related to publication of papers, but only in organizations where such publication may be important.

B. OCR (CHIEF ENGINEERS RATING)

FORD

OCR - FORD

(APPENDIX 5)

± CORRELATION RANGE (SAMPLE SIZE RANGE)

	CETOT	CETECH	CEBUS	CEOTH	DRI.
ALL PEOPLE				-0.18 - -0.20 (81)	+0.35 (63)
M.S.				-0.38 - -0.41 (26)	
NO M.S.					+0.44 (40)
PH.D.					
LOW SCHOOLS					+0.28 (39)
TOP SCHOOLS					
LOW GPA					+0.62 (13)
MID GPA					+0.54 (15)
HIGH GPA					
HONORS					
NO HONORS				-0.23 (57)	
LOW IPR	+0.65 - +0.72 (11)		+0.59 (11)		
MID IPR					
HIGH IPR					
LOW IFR			+0.44 (16)		
MID IFR	+0.60 - +0.62 (14)	+0.46 - +0.49 (14)			
HIGH IFR					

The OCR data are largely useless, although there is a clue to a weak negative relationship with CEOTH. DRIVE shows moderate positive correlations. Data filtering (Appendix 21B) produces no useful results. The persistence within ability groups is marginal.

FMC

OCR - FMC ± CORRELATION RANGE (SAMPLE SIZE RANGE)

(APPENDIX 7)	CETOT	CETECH	CEBUS	CEOTH	DRIVE
ALL PEOPLE			+0.17 - +0.22 (103)		+0.27 (92)
M.S.				-0.41 - -0.42 (21)	
NO M.S.	+0.2 - +0.22 (82)		+0.18 - +0.25 (82)		+0.31 (73)
PH.D.					
LOW SCHOOLS					
TOP SCHOOLS					
LOW GPA					
MID GPA					
HIGH GPA					
HONORS					
NO HONORS					+0.27 (64)
LOW IPR	+0.36 (28)				
MID IPR		+0.36 - +0.41 (23)			
HIGH IPR					
LOW IFR	+0.35 - +0.41 (29)		+0.34 - +0.37 (29)	+0.34 - +0.40 (29)	
MID IFR			-0.32 - +0.31 (29)		+0.36 (26)
HIGH IFR					

Weak positive relationships are shown with CEBUS for All People. No pattern of persistence within ability groups is shown. DRIVE is weakly positively correlated, but no persistence is shown within ability groups. Data filtering (Appendix 21F) produces stronger correlations with CEBUS as the threshold level is increased to 100 hours of CETECH.

SYLVANIA

OCR - SYLVANIA ± CORRELATION RANGE (SAMPLE SIZE RANGE)

(APPENDIX 8)	CETOT	CETECH	CEBUS	CEOTH	DRIVE
ALL PEOPLE			-0.29 - -0.37 (36)		+0.57 (24)
M.S.					
NO M.S.			-0.36 - -0.40 (28)		+0.60 (16)
PH.D.					
LOW SCHOOLS			-0.75 - -0.91 (9)		+0.67 (9)
TOP SCHOOLS					
LOW GPA					
MID GPA					
HIGH GPA					
HONORS			-0.67 (8)		+0.86 (8)
NO HONORS					
LOW IPR	-0.55 - -0.67 (10)		-0.56 - -0.63 (10)		
MID IPR					
HIGH IPR					+0.88 (6)
LOW IFR					
MID IFR					
HIGH IFR					

All People show a moderate negative correlation pattern with CEBUS which does not persist within ability groups. Strong positive correlations are shown with DRIVE which do not persist within ability groups. Data filtering (Appendix 21H) produces a stronger pattern of negative correlations with CEBUS when eliminating participants with zero hours of CETECH.

ALL COMBINED

OCR - ALL COMBINED ± CORRELATION RANGE (SAMPLE SIZE RANGE)

(APPENDIX 9)	CETOT	CETECH	CEBUS	CEOTH	DRI.
ALL PEOPLE			+0.13 - +0.14 (220)		+0.34 (179)
M.S.				-0.23 - -0.34 (52)	
NO M.S.			+0.14 - +0.18 (165)		+0.39 (129)
PH.D.					
LOW SCHOOLS					+0.29 (100)
TOP SCHOOLS	+0.30 - +0.33 (34)		+0.35 - +0.40 (34)		
LOW GPA					+0.42 (42)
MID GPA					+0.36 (40)
HIGH GPA	+0.25 - +0.27 (47)				
HONORS					+0.25 (57)
NO HONORS					+0.36 (122)
LOW IPR					
MID IPR	+0.28 - +0.31 (37)				
HIGH IPR	+0.26 - +0.33 (49)		+0.22 - +0.25 (49)		
LOW IFR					
MID IFR			+0.24 - +0.28 (51)		
HIGH IFR	+0.32 - +0.35 (45)		+0.30 - +0.35 (45)		

All People show a residual pattern of weak positive correlations with CEBUS which has marginal persistence within ability groups. A scattergram showing the relationships with CEBUS in year 12 is shown in Figure 19. Also there is fair persistence within ability groups of moderate positive relationships with DRIVE.

SUMMARY OF OCR RELATIONSHIPS

A consistent pattern of moderate positive relationships is shown between DRIVE and OCR which seem to be independent of ability. The relationships between CEBUS and OCR are clearly negative at Sylvania and positive at FMC and data filtering makes these correlations stronger. CETECH shows no relationships of significance--and this is surprising.

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OUTCOME VS CE                                                                                    05/09/78          PAGE   10

FILE    ROI          (CREATION DATE = 11/02/77)   CONTINUING EDUCATION -- ENGINEERS
SUBFILE    FORD          NASA          FMC             SYLVANIA
SCATTERGRAM OF     (DOWN) OCR                                            (ACROSS) CEBUS12
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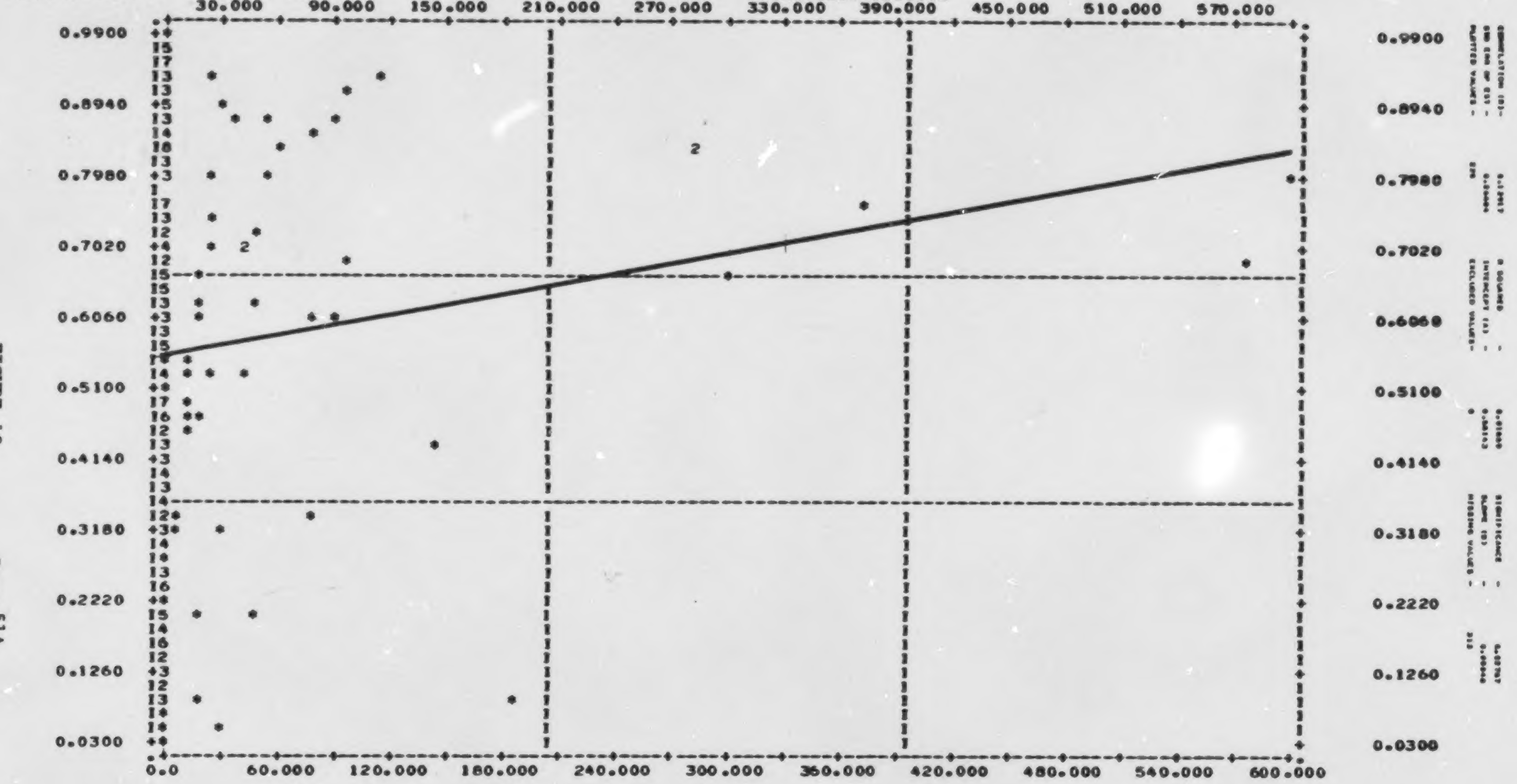

FIGURE 19

C. OCT (TECHNICAL JOB CHALLENGE)

FORD

OCT - FORD
(APPENDIX 5)

± CORRELATION RANGE (SAMPLE SIZE RANGE)

	CETOT	CETECH	CEBUS	CEOTH	DRIVE
ALL PEOPLE					
M.S.					-0.38 - -0.44 (21 - 22)
NO M.S.					+0.27 - +0.52 (23 - 33)
PH.D.					
LOW SCHOOLS					
TOP SCHOOLS	-0.51 - +0.69 (12)				-0.61 - -0.76 (5 - 9)
LOW GPA			+0.39 - +0.46 (22 - 26)		
MID GPA					
HIGH GPA	+0.37 - +0.54 (21 - 23)	+0.38 - +0.64 (21 - 23)			
HONORS	+0.38 - +0.42 (25 - 31)	+0.43 - +0.38 (25 - 31)			
NO HONORS					
LOW IPR		-0.95 - +0.65 (5 - 9)			
MID IPR					
HIGH IPR					+0.61 - +0.77 (10)
LOW IFR					
MID IFR					
HIGH IFR					
LOW OCR					-0.30 - +0.49 (23 - 32)
MID OCR					
HIGH OCR					

No significant correlations show for All People. While significant correlations show within ability groups, no clear pattern emerges.

NASA

OCT - NASA
(APPENDIX 6)

± CORRELATION RANGE (SAMPLE SIZE RANGE)

	CETOT	CETECH	CEBUS	CEOTH	DRIVE
ALL PEOPLE				-0.26 - +0.24 (42 - 48)	
M.S.					
NO M.S.					
PH.D.					
LOW SCHOOLS				-0.29 - -0.42 (34 - 40)	
TOP SCHOOLS	-0.59 - -0.77 (8 - 13)	-0.56 - -0.77 (8 - 13)			
LOW GPA					
MID GPA	-0.49 - -0.58 (13 - 14)	-0.50 - -0.58 (13 - 14)			
HIGH GPA					
HONORS					
NO HONORS					
LOW IPR	-0.98 - +0.69 (5 - 8)	-1.0 - +0.75 (5 - 8)			
MID IPR					
HIGH IPR					
LOW IFR					
MID IFR					
HIGH IFR	-0.57 - -0.77 (6 - 12)				-0.65 - -0.91 (7 - 9)

No useful results here.

OCT - FMC

± CORRELATION RANGE (SAMPLE SIZE RANGE)

FMC

(APPENDIX 7)	CETOT	CETECH	CEBUS	CEOTH	DRIVE
ALL PEOPLE					-0.30 - -0.45 (34 - 43)
M.S.					
NO M.S.					-0.31 - -0.51 (29 - 32)
PH.D.					
LOW SCHOOLS					-0.32 - -0.48 (24 - 27)
TOP SCHOOLS	+0.44 - +0.92 (7 - 16)	+0.50 - +0.79 (7 - 16)		+0.43 - +0.84 (7 - 16)	
LOW GPA					
MID GPA					
HIGH GPA					-0.48 - -0.54 (15 - 17)
HONORS				+0.48 - +0.53 (13 - 18)	
NO HONORS					-0.42 - -0.65 (22 - 29)
LOW IPR					
MID IPR					
HIGH IPR				+0.59 - +0.66 (11 - 14)	-0.52 - -0.63 (11 - 13)
LOW IFR					
MID IFR					-0.53 - -0.63 (11 - 14)
HIGH IFR			-0.55 - -0.65 (11 - 15)		
LOW OCR			-0.42 - -0.46 (15 - 20)		-0.55 - -0.59 (11 - 13)
MID OCR					
HIGH OCR					

All People show moderate negative correlations with DRIVE. The pattern of negative relationships with DRIVE is quite persistent within ability groups.

OCT - SYLVANIA

± CORRELATION RANGE (SAMPLE SIZE RANGE)

SYLVANIA

(APPENDIX 8)	CETOT	CETECH	CEBUS	CEOTH	DRIVE
ALL PEOPLE					
M.S.	+0.38 - +0.39 (20 - 23)	+0.36 - +0.45 (20 - 23)			
NO M.S.					
PH.D.					
LOW SCHOOLS					
TOP SCHOOLS					+0.40 - -0.71 (8 - 9)
LOW GPA				-0.42 - +0.53 (12 - 18)	
MID GPA					
HIGH GPA			+0.52 - +0.61 (10 - 14)		
HONORS	+0.52 - +0.57 (14 - 17)			+0.5 - +0.55 (14 - 17)	
NO HONORS			-0.39 - -0.42 (23 - 26)		
LOW IPR					
MID IPR					
HIGH IPR					
LOW IFR					
MID IFR				+0.56 - +0.57 (10 - 14)	
HIGH IFR					
LOW OCR					
MID OCR					
HIGH OCR					

No useful results here.

ALL COMBINED

OCT - ALL COMBINED ± CORRELATION RANGE (SAMPLE SIZE RANGE)

(APPENDIX 9)

	CETOT	CETECH	CEBUS	CEOTH	DRIVE
ALL PEOPLE		-0.13 - -0.14 (170 - 209)			
H.S.					
NO H.S.					
PH.D.					
LOW SCHOOLS					
TOP SCHOOLS		-0.46 - +0.23 (31 - 55)			
LOW GPA	-0.20 - -0.22 (61 - 76)	-0.20 - -0.30 (61 - 76)			
MID GPA					
HIGH GPA					
HONORS					
NO HONORS	-0.18 - -0.23 (89 - 116)	-0.24 - -0.29 (89 - 116)			
LOW IPR					
MID IPR	-0.27 - -0.39 (26. 38)				
HIGH IPR					
LOW IFR					
MID IFR					
HIGH IFR				+0.35 - +0.37 (35 - 36)	
LOW OCR					
MID OCR					
HIGH OCR				-0.31 - +0.47 (26 - 29)	

Only weak negative correlations with CETECH survive the disparity between organizations, but these do not persist within ability groups.

SUMMARY OF OCT RELATIONSHIPS - While the patterns shown are not very persistent, the correlations between CETECH and OCT seem consistently weak and consistently negative wherever they appear. The same is true for the correlations between DRIVE and OCT, even though only FMC shows a pattern of persistence in these correlations.

D. OCM (MANAGEMENT JOB CHALLENGE)

FORD

OCM - FORD ± CORRELATION RANGE (SAMPLE SIZE RANGE)

(APPENDIX 5)

	CETOT	CETECH	CEBUS	CEOTH	DRIVE
ALL PEOPLE			-0.20 - -0.21 (73 - 76)		
H.S.					
NO H.S.					
PH.D.					
LOW SCHOOLS					
TOP SCHOOLS			-0.49 - -0.62 (14 - 15)		
LOW GPA					
MID GPA	-0.37 - -0.40 (22 - 25)				
HIGH GPA					-0.47 - -0.53 (11 - 16)
HONORS					
NO HONORS					
LOW IPR					
MID IPR					
HIGH IPR		+0.55 - +0.72 (8 - 12)			
LOW IFR					
MID IFR					
HIGH IFR					
LOW OCR					-0.41 - -0.43 (23 - 35)
MID OCR					
HIGH OCR					

All People show CEBUS negatively and weakly correlated with OCM but no persistence is shown within ability groups.

NASA

OCM - NASA (APPENDIX 6)

± CORRELATION RANGE (SAMPLE SIZE RANGE)

	CETOT	CETECH	CEBUS	CEOTH	DRIVE
ALL PEOPLE			-0.25 - -0.41 (38 - 55)		
M.S.			-0.31 - -0.47 (26 - 35)		
NO M.S.					
PH.D.					
LOW SCHOOLS					
TOP SCHOOLS			-0.56 - -0.66 (16 - 18)		
LOW GPA					
MID GPA					-0.53 - -0.58 (12 - 13)
HIGH GPA			-0.52 - -0.65 (15 - 21)		+0.61 - -0.94 (5 - [illegible])
HONORS			-0.42 - -0.47 (13 - 18)		+0.38 - -0.49 (18 - 21)
NO HONORS			-0.39 - -0.51 (25 - 29)		-0.42 - -0.57 (10 - 22)
LOW IPR					+0.64 - -0.88 (7 - 8
MID IPR					
HIGH IPR	-0.82 - +0.60 (5 - 10)				-0.62 - -1.0 (6 - [illegible])
LOW IFR					
MID IFR	+0.59 - +0.68 (11 - 12)	+0.58 - +0.70 (11 - 12)			
HIGH IFR			-0.50 - -0.60 (11 - 12)		

All People show weak-moderate negative correlations between CEBUS and OCM. These persist fairly well within ability groups.

FMC

OCM - FMC (APPENDIX 7)

± CORRELATION RANGE (SAMPLE SIZE RANGE)

	CETOT	CETECH	CEBUS	CEOTH	DRIVE
ALL PEOPLE	-0.27 - -0.34 (43 - 48)		-0.27 - -0.29 (39 - 48)		-0.31 - -0.36 (33 - 39)
M.S.					
NO M.S.	-0.33 - -0.39 (33 - 34)		-0.31 - -0.44 (33 - 36)		-0.40 - -0.46 (25)
PH.D.					
LOW SCHOOLS					-0.38 - -0.38 (26 - 30)
TOP SCHOOLS					+0.51 - +0.58 (11 - 16)
LOW GPA			-0.45 - -0.71 (13 - 17)		
MID GPA					
HIGH GPA					
HONORS					
NO HONORS	-0.34 - -0.41 (28 - 32)		-0.39 - -0.40 (23 - 33)		
LOW IPR	-0.62 - -0.77 (8 - 10)	-0.62 - -0.72 (8 - 10)	-0.64 - -0.86 (8 - 9)		
MID IPR					-0.51 - -0.64 (11 - 13)
HIGH IPR					
LOW IFR					
MID IFR					
HIGH IFR			-0.48 - -0.76 (11 - 13)		
LOW OCR					
MID OCR					-0.51 - -0.56 (12 - 14)
HIGH OCR					

All People show moderate negative correlations between OCM and CETOT/CEBUS/DRIVE. This relationship persists within a number of ability groups.

SYLVANIA

OCM - SYLVANIA   ± CORRELATION RANGE (SAMPLE SIZE RANGE)

(APPENDIX 8)

	CETOT	CETECH	CEBUS	CEOTH	DRIVE
ALL PEOPLE			-0.30 - -0.38 (40 - 43)		
M.S.					
NO M.S.			-0.42 - -0.43 (18 - 18)		
PH.D.					
LOW SCHOOLS					
TOP SCHOOLS					
LOW GPA			-0.51 - -0.58 (14 - 16)		-0.53 - -0.65 (9 - 11)
MID GPA					
HIGH GPA					
HONORS					
NO HONORS					
LOW IPR					
MID IPR					
HIGH IPR			-0.56 - -0.66 (10 - 11)	-0.66 - -0.70 (10 - 12)	-0.56 - -0.65 (10 - 12)
LOW IFR					
MID IFR					
HIGH IFR					
LOW OCR			-0.30 - -0.34 (32 - 35)		
MID OCR					
HIGH OCR			-1.0 - -1.0 (3 - 4		

All People show moderate negative correlations with CEBUS with marginal persistence within various ability groups.

ALL COMBINED

OCM - ALL COMBINED   ± CORRELATION RANGE (SAMPLE SIZE RANGE)

(APPENDIX 9)

	CETOT	CETECH	CEBUS	CEOTH	DRIVE
ALL PEOPLE			-0.14 - -0.18 (160 - 190)		+0.16 - -0.17 (136 - 161)
M.S.			-0.23 - -0.35 (72 - 93)		
NO M.S.	-0.18 - +0.18 (91 - 118)		-0.21 - -0.30 (101 - 118)		-0.20 - -0.24 (78 - 80)
PH.D.					
LOW SCHOOLS			-0.17 - -0.24 (105 - 146)	+0.14 - +0.15 (134 - 147)	
TOP SCHOOLS	-0.22 - -0.33 (45 - 66)		-0.25 - -0.50 (45 - 66)		
LOW GPA			-0.24 - -0.47 (53 - 72)		-0.23 - -0.28 (43 - 56)
MID GPA	-0.25 - -0.27 (55 - 63)		-0.22 - -0.28 (58 - 58)		-0.27 - -0.29 (40 - 49)
HIGH GPA			-0.30 - -0.31 (65 - 70)		
HONORS					
NO HONORS	-0.15 - -0.26 (114 - 133)		-0.22 - -0.25 (114 - 133)		-0.19 - -0.25 (89 - 103)
LOW IPR	-0.26 - -0.45 (36 - 42)		-0.29 - -0.45 (36 - 42)		
MID IPR					
HIGH IPR			-0.35 - -0.38 (34 - 39)		
LOW IFR			-0.27 - -0.31 (39 - 44)		-0.32 - -0.32 (31 - 37)
MID IFR					
HIGH IFR					
LOW OCR	-0.18 - -0.22 (82 - 97)		-0.18 - -0.23 (82 - 97)		-0.24 - -0.26 (59 - 65)
MID OCR					-0.36 - -0.60 (22 - 26)
HIGH OCR			-0.31 - -0.37 (33 - 34)		

The message here is loud and clear. Both CEBUS and DRIVE show a consistent pattern of negative weak correlations with OCM which is largely independent of ability.

DATA FILTERING

Appendix 22 shows the effects of data filtering on the correlations between CEBUS and OCM for each organization separately. In the case of Ford, the pattern of correlation is lost immediately. For NASA, the correlations become more strongly negative as the threshold of CETECH hours sampled is increased. FMC shows improvement in strength of negative correlations at the cut level of zero CETECH hours. Sylvania results are similar to those of FMC.

SUMMARY OF OCM RELATIONSHIPS - NASA, FMC, Sylvania and All Combined all show consistent negative relationships between CEBUS and OCM. The negative relationship between DRIVE and OCM is not as persistent from group to group but the pattern is clearly there. Apparently, the more engineers participate in CEBUS and the stronger their DRIVE, the less they find the management challenge of their jobs.

VI MULTIPLE REGRESSIONS - CE/ABILITY/DRIVE VARIABLE VS. OUTCOMES

The bi-variate data presented in Section V show significant correlations between both CE variables and DRIVE and the various outcome variables. Dividing each organization and all combined into various ability groups shows a persistence of correlations with both CE and DRIVE within these groups. This indicates that their effects are largely independent of the ability measures used. But, these bi-variate correlations do not show the relative contributions of the CE variables and the ability variables and the relationship of both types of variables with the dominating personality characteristic designated as DRIVE. To put all variables in their proper perspective, multiple regression analyses have been performed and the results are presented here. Only all people in each organization are treated and sample sizes allow for valid statistics. Further, only the results of stepwise regressions--where each variable is entered in its order of importance--are presented. Hierarchical regressions, predicated on the concept that the ability and DRIVE variables would dominate the results, quickly showed that such was not the case. The data from the hierarchical regressions are not included in this Report.

In the multiple regression analyses, only objective data variables are used. OCR, IPR and IFR are not included. In addition, ISCH and CEOTH are left out. ISCH was not included as it didn't show a pattern of significant bi-variate correlations. The decision to leave out CEOTH was made early, before it was realized to what extent significant bi-variate correlations with CEOTH would surface. Unfortunately, it was not feasible to redo all of the regressions to include CEOTH.

In reviewing the multiple regression data shown in the Appendices, the column RSQ change, which means R^2 change, is the primary reference. The value of RSQ change shown represents the contribution of each variable to the total variance and it allows comparison between variables of these contributions. Whether the contribution is positively or negatively correlated is shown by the sign in the column labelled SIMPLE R.

In the following presentation, information derived from Appendices 15-19 are summarized for convenience. Not included are any values of RSQ change smaller than 0.02. For the purpose of these results, such small values were ignored. The (-) sign following the numbers in the Tables indicates that the correlation is negative for that variable in that year. Also shown are the values of R^2 in each period representing the total % variation in outcome explained by all variables.

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1. PRIMARY OUTCOME VARIABLES

A. OAC (ABSOLUTE COMPENSATION)

FORD (APPENDIX 10F)

RSQ CHANGE (% OF VARIATION IN OUTCOME EXPLAINED BY VALUE SHOWN)

YEARS	3	6	9	12	15	18
CETECH	11 (-)	-	3	4	-	3
CEBUS	-	7	10	-	3	-
DRIVE	11	9	2	-	-	14
PH.D.	9	6	-	-	-	4
M.S.	-	-	-	-	-	-
IGPA	-	-	-	-	-	-
ISH	-	-	-	-	10	7

TOTAL % VARIATION IN OUTCOME EXPLAINED BY ALL VARIABLES

34	20	17	8	13	31

The most consistent and strongest pattern is with DRIVE. CETECH and CEBUS contribute somewhat - as do academic variables, but there is no clear pattern here. (Note that the bi-variate correlations for All People showed correlations with CEBUS or CETECH and reliance on these alone could have been misleading). The total % variation in OAC explained by all variables is relatively small except in Year 3 and 18.

NASA (APPENDIX 11E)

RSQ CHANGE (% OF VARIATION IN OUTCOME EXPLAINED BY VALUE SHOWN)

YEARS	3	6	9	12	15	18
CETECH	-	2	29	45	39	38
CEBUS	22	5(-)	-	2	-	-
DRIVE	13	-	-	-	-	-
PH.D.	16	10	-	-	2	5
M.S.	28	2	4	4	8	-
IGPA	2	17	-	-	-	-
ISH	15	6	3	-	-	-

TOTAL % VARIATION IN OUTCOME EXPLAINED BY ALL VARIABLES

98	42	37	53	51	45

This is the kind of pattern which enables definitive conclusions. CETECH is clearly dominant in Year 9 through 18 and is stronger by a factor of 4-8 than all other variables combined. Advanced degrees persist in importance but at a much lower level. Scholastic attainment is only important in the first two periods. It is interesting to note how little DRIVE contributes here but this is consistent with the bi-variate correlation data. CEBUS is a questionable predictor as well and this conclusion could not be drawn from the bi-variate correlation patterns.

The total % variation in OAC explained by all variables is high in all years and is dominated by CE in Years 9 - 18.

FMC (APPENDIX 12F)

RSQ CHANGE (% OF VARIATION IN OUTCOME EXPLAINED BY VALUE SHOWN)

YEARS	3	6	9	12	15	18
CETECH	15	-	3	17	7	3(-)
CEBUS	3	10	16	3	27	45
DRIVE	5	19	13	12	3(-)	5(-)
PH.D.	-	11	-	-	-	-
M.S.	-	-	-	6(-)	6(-)	-
IGPA	13	4(-)	18(-)	-	8	-
ISH	-	-	-	-	-	3

TOTAL % VARIATION IN OUTCOME EXPLAINED BY ALL VARIABLES

38	48	52	38	52	58

This pattern shows CEBUS clearly dominant, with strong contributions from CETECH and DRIVE, although both show negative correlations in later years. Academic variables are either negatively correlated or much less important. The contribution of positively correlated CE variables in the last four periods far exceeds that of all other variables combined. In all periods, the total % variation in OAC explained by all variables is high and dominant in Years 12 - 18.

SYLVANIA (APPENDIX 13F)

RSQ CHANGE (% OF VARIATION IN OUTCOME EXPLAINED BY VALUE SHOWN)

YEARS	3	6	9	12	15	18
CETECH	-	-	11	13	7	31
CEBUS	-	-	4	3(-)	-	20
DRIVE	-	-	3	-	7	5
PH.D.	8(-)	-	-	2	21	5
M.S.	2	7(-)	-	-	-	-
IGPA	-	-	-	5	-	-
ISH	8	5	-	-	-	3(-)

TOTAL % VARIATION IN OUTCOME EXPLAINED BY ALL VARIABLES

22	16	22	25	37	65

This shows a pattern of dominance by CETECH. Ph.D. in the last three periods is important but other academic variables show little importance. In three of the last four periods, CE dominates in determining the outcome. In the last 3 periods, the total % variation in OAC explained by all variables is quite high.

ALL COMBINED (APPENDIX 14F)

RSQ CHANGE (% OF VARIATION IN OUTCOME EXPLAINED BY VALUE SHOWN)

YEARS	3	6	9	12	15	18
CETECH	-	-	5	21	11	7
CEBUS	3	3	6	-	4	13
DRIVE	3	4	4	-	-	-
PH.D.	3	4	-	-	3	2
M.S.	3(-)	-	-	-	-	-
IGPA	-	-	-	-	-	-
ISH	2	-	-	-	-	-

TOTAL % VARIATION IN OUTCOME EXPLAINED BY ALL VARIABLES

16	14	17	25	18	24

CETECH is clearly most important in the last three periods but CEBUS is very close. DRIVE is about as important as CEBUS in the first three periods. Ph.D. persists well but less strongly than CEBUS. Clearly, in the last four periods, CE dominates and, in combination, far exceeds all other variables combined. The total % variation in OAC explained by all variables is relatively small. It is apparently weakened by the diversity between organizations.

SUMMARY OF OAC RELATIONSHIPS - The contributions of CE in explaining the total variance in OAC are dominant in Years 12 - 18. CETECH dominates in the results of NASA, Sylvania and All Combined and is important in the results of Ford and FMC. CEBUS is dominant in the results of Ford and FMC and is important in the results of NASA, Sylvania and All Combined. The data for All Combined show DRIVE playing an important role only in Years 3 - 9 and academic variables being important only in Years 3 - 6.

B. ORC (RELATIVE COMPENSATION)

FORD (APPENDIX 10A)

RSQ CHANGE (% OF VARIATION IN OUTCOME EXPLAINED BY VALUE SHOWN)

YEARS	3	6	9	12	15	18
CETECH	3	-	5	-	2(-)	3(-)
CEBUS	4	-	-	3(-)	-	-
DRIVE	-	8	12	-	-	-
PH.D.	3	-	-	-	-	-
M.S.	9(-)	3	-	6	7	10
IGPA	3(-)	-	-	-	7(-)	14(-)
ISH	-	-	-	-	-	-

TOTAL % VARIATION IN OUTCOME EXPLAINED BY ALL VARIABLES

23	17	19	12	18	30

The only data which seem to mean much here are the positive pattern shown with MS and the negative pattern shown with IGPA (and these two results seem contradictory). The positive relationships shown with DRIVE in the bi-variate correlations do not consistently survive the regression analyses. The % variation in ORC explained by all variables is relatively small except in Year 18.

NASA (APPENDIX 11A)

RSQ CHANGE (% OF VARIATION IN OUTCOME EXPLAINED BY VALUE SHOWN)

YEARS	3	6	9	12	15	18
CETECH	-	16	20	26	14	19
CEBUS	-	2	-	-	-	-
DRIVE	-	6(-)	-	-	-	-
PH.D.	7	6	-	-	3	3
M.S.	5	-	2	4	-	-
IGPA	2	-	-	-	-	-
ISH	3(-)	-	-	-	-	-

TOTAL % VARIATION IN OUTCOME EXPLAINED BY ALL VARIABLES

19	31	24	32	20	23

This shows a clear pattern of dominance of CETECH in the last 5 periods with its correlations being stronger than all other variables combined. Advanced degrees contribute, but at a much lower level. Note that DRIVE is negligible in its contributions. CEBUS, which shows strong positive relationships within some ability groups in the bi-variate data, is of negligible importance in the regression results. The % variation in ORC explained by all variables is quite high in Years 6 and 12.

FMC (APPENDIX 12A)

RSQ CHANGE (% OF VARIATION IN OUTCOME EXPLAINED BY VALUE SHOWN)

YEARS	3	6	9	12	15	18
CETECH	-	5(-)	-	18	-	3
CEBUS	5	-	-	-	6	-
DRIVE	3	-	-	5(-)	-	3(-)
PH.D.	-	9	-	-	-	-
M.S.	7	3	12(-)	-	-	-
IGPA	14(-)	4(-)	-	4	-	-
ISH	7	-	6	7	-	5(-)

TOTAL % VARIATION IN OUTCOME EXPLAINED BY ALL VARIABLES

36	23	20	35	10	13

No clear pattern can be derived from these mixed results, even though the % variation in ORC explained by all variables is quite high in Years 3 and 12. This is consistent with the bi-variate correlation data.

SYLVANIA (APPENDIX 13A)

RSQ CHANGE (% OF VARIATION IN OUTCOME EXPLAINED BY VALUE SHOWN)

YEARS	3	6	9	12	15	18
CETECH	6	6(-)	4	-	9	6
CEBUS	-	-	-	-	9	-
DRIVE	8(-)	3	-	-	7	10
PH.D.	3(-)	-	-	-	7	9
M.S.	12(-)	11	3	-	6(-)	3(-)
IGPA	9	2	-	-	-	-
ISH	-	-	17	11	-	-

TOTAL % VARIATION IN OUTCOME EXPLAINED BY ALL VARIABLES

39	27	27	14	39	32

CETECH shows the most consistent pattern, with DRIVE about the same. CEBUS shows essentially nothing and academic variables are very mixed. The % variation in ORC explained by all variables is quite high in Years 3, 15 and 18. Note that these results are not predictable from the bi-variate correlation data.

ALL COMBINED (APPENDIX 14A)

RSQ CHANGE (% OF VARIATION IN OUTCOME EXPLAINED BY VALUE SHOWN)

YEARS	3	6	9	12	15	18
CETECH	1	-	6	8	-	-
CEBUS	-	-	2	-	-	-
DRIVE	-	-	-	-	-	-
PH.D.	4	-	-	-	-	-
M.S.	-	7	3	-	3	3
IGPA	-	-	-	-	2(-)	4(-)
ISH	-	-	-	3	-	-

TOTAL % VARIATION IN OUTCOME EXPLAINED BY ALL VARIABLES

6	11	13	12	6	6

These values are all quite weak, reflecting the mixed nature of the data from each organization separately. MS shows a consistent positive pattern with CETECH showing a weak positive pattern. The weak positive pattern with CETECH is consistent with the bi-variate correlation results. The % variation explained by all variables is small in all years.

SUMMARY OF ORC RELATIONSHIPS - The ORC variable does not produce consistent results. Only in the case of NASA is there a strong clear pattern where CETECH dominates the results. However, in the combined results, the MS degree does come through the noise because, while not too important in any individual organization, there is apparently enough of a pattern in each for it to survive in the combined data. It is surprising, in looking back at the CETECH data for each organization, that a stronger pattern with CETECH does not evolve for the combined group.

C. OSP (NUMBER OF PERSONS SUPERVISED)

FORD (APPENDIX 10B)

RSQ CHANGE (% OF VARIATION IN OUTCOME EXPLAINED BY VALUE SHOWN)

YEARS	3	6	9	12	15	18
CETECH	-	4(-)	4(-)	2(-)	-	-
CEBUS	-	-	-	-	-	3
DRIVE	5	-	-	2	-	4
PH.D.	-	-	-	-	-	-
M.S.	-	-	4	-	-	-
IGPA	-	-	-	-	-	-
ISH	3(-)	-	-	3	3	-

TOTAL % VARIATION IN OUTCOME EXPLAINED BY ALL VARIABLES

13	7	11	10	8	12

The only pattern of significance here is the consistent negative correlation with CETECH and a weak positive pattern with DRIVE. The CETECH pattern could not have been predicted from the bi-variate data. CEBUS shows a weak positive pattern. The % variation in OSP explained by all variables is consistently small.

NASA (APPENDIX 11B)

RSQ CHANGE (% OF VARIATION IN OUTCOME EXPLAINED BY VALUE SHOWN)

YEARS	3	6	9	12	15	18
CETECH	6(-)	4(-)	-	5	-	6(-)
CEBUS	-	19	-	-	-	4
DRIVE	-	4	6	7	5	4
PH.D.	-	-	-	-	-	-
M.S.	-	-	9(-)	3(-)	7(-)	5
IGPA	-	-	-	-	-	-
ISH	-	9(-)	4	-	5	-

TOTAL % VARIATION IN OUTCOME EXPLAINED BY ALL VARIABLES

8	38	18	16	16	20

The positive pattern with DRIVE is very consistent. MS and CETECH both show a pattern of negative correlation. These results are quite different from the bi-variate data. The % variation in OSP explained by all variables is quite high in Year 6.

FMC (APPENDIX 12B)

RSQ CHANGE (% OF VARIATION IN OUTCOME EXPLAINED BY VALUE SHOWN)

YEARS	3	6	9	12	15	18
CETECH	-	-	-	-	-	5
CEBUS	-	-	-	10	10	7
DRIVE	12	3(-)	-	-	-	-
PH.D.	-	-	-	-	-	-
M.S.	-	-	-	-	3(-)	6(-)
IGPA	2(-)	8	-	-	4	4
ISH	11(-)	-	-	-	-	-

TOTAL % VARIATION IN OUTCOME EXPLAINED BY ALL VARIABLES

27	14	5	14	20	23

CEBUS shows a positive pattern consistent with bi-variate results and IGPA shows a weak positive pattern. The % variation in OSP explained by all variables is quite high only in Year 3.

SYLVANIA (APPENDIX 13B)

RSQ CHANGE (% OF VARIATION IN OUTCOME EXPLAINED BY VALUE SHOWN)

YEARS	3	6	9	12	15	18
CETECH	11(-)	4(-)	-	-	-	-
CEBUS	-	-	52	31	9	-
DRIVE	8(-)	-	5	4	16	8
PH.D.	29	4(-)	-	-	-	-
M.S.	-	4	-	-	-	-
IGPA	3	2(-)	-	-	-	10(-)
ISH	-	-	-	4(-)	-	-

TOTAL % VARIATION IN OUTCOME EXPLAINED BY ALL VARIABLES

51	17	61	42	29	20

Both CEBUS and DRIVE show strong positive patterns. The DRIVE pattern here is quite different than that yielded by the bi-variate correlations. In this case, the % variation in OSP explained by all variables is high in Years 3, 9, 12 and 15.

ALL COMBINED (APPENDIX 14B)

RSQ CHANGE (% OF VARIATION IN OUTCOME EXPLAINED BY VALUE SHOWN)

YEARS	3	6	9	12	15	18
CETECH	-	3(-)	-	-	-	-
CEBUS	-	-	-	-	-	-
DRIVE	-	-	-	3	-	3
PH.D.	-	-	-	-	-	-
M.S.	-	-	-	-	-	-
IGPA	-	-	-	-	-	-
ISH	-	-	-	-	-	-

TOTAL % VARIATION IN OUTCOME EXPLAINED BY ALL VARIABLES

6	4	4	6	4	5

No patterns of significance survive here, and the % variance in OSP explained by all variables is very small.

SUMMARY - CEBUS significantly positively affects supervisory responsibility at FMC and Sylvania and shows some positive effect at both Ford and NASA. DRIVE is persistently positive correlated and contributes significantly at Sylvania, less significantly at NASA and weakly at Ford and FMC. No academic related variables enable any prediction except perhaps IGPA at FMC, which shows a weak positive pattern. CETECH is quite persistently negatively correlated and is clearly not a path to increased supervisory responsibility.

2. SECONDARY OUTCOME VARIABLES

A. OPT (Patents) - No regressions were performed.

B. OPB (Publications) - No regressions were performed.

C. OCR (Chief Engineer's Rating) - It should be noted here that DRIVE and academic variables are all fixed in their correlations so that only the CE variables will change correlations with time. However, the relative contributions of these variables may well change due to the regression process, i.e., the multiple R is not the same as the simple bi-variate R.

FORD (APPENDIX 10C)

RSQ CHANGE (% OF VARIATION IN OUTCOME EXPLAINED BY VALUE SHOWN)

YEARS	3	6	9	12	15	18
CETECH	-	-	-	-	-	-
CEBUS	3	-	-	2	-	2
DRIVE	12	12	12	12	12	12
PH.D.	-	-	-	-	-	-
M.S.	-	-	-	-	-	-
IGPA	5	5	5	5	5	5
ISH	-	-	-	-	-	-

TOTAL % VARIATION IN OUTCOME EXPLAINED BY ALL VARIABLES

21	20	20	21	20	20

DRIVE dominates and it and IGPA both contribute positively. CEBUS shows a very weak positive pattern. The % variation in OCR explained by all variables is small.

FMC (APPENDIX 12C)

RSQ CHANGE (% OF VARIATION IN OUTCOME EXPLAINED BY VALUE SHOWN)

YEARS	3	6	9	12	15	18
CETECH	-	-	-	-	-	-
CEBUS	2	-	3	3	4	6
DRIVE	7	7	7	7	7	7
PH.D.	-	-	-	-	-	-
M.S.	-	-	-	-	-	-
IGPA	-	-	-	-	-	-
ISH	-	-	-	-	-	-

TOTAL % VARIATION IN OUTCOME EXPLAINED BY ALL VARIABLES

12	12	13	13	14	15

DRIVE again is important followed by a weak but very persistent positive pattern with CEBUS. Again the % variation in OCR explained by all variables is small.

SYLVANIA (APPENDIX 13C)

RSQ CHANGE (% OF VARIATION IN OUTCOME EXPLAINED BY VALUE SHOWN)

YEARS	3	6	9	12	15	18
CETECH	5	14	12	10	9	8
CEBUS	8(-)	7(-)	9(-)	9(-)	10(-)	7(-)
DRIVE	33	33	33	33	33	33
PH.D.	-	3(-)	-	-	-	2(-)
M.S.	-	-	-	-	-	-
IGPA	-	-	-	-	-	3(-)
ISH	-	-	-	-	-	-

TOTAL % VARIATION IN OUTCOME EXPLAINED BY ALL VARIABLES

54	61	62	60	61	55

DRIVE is positive and very strong here. CETECH is positive and strong and CEBUS is negative and just as strong. This result is interesting because the bi-variate correlations showed no patterns of significant correlations at all between CETECH and OCR. And yet, when added into the multiple regression equation, CETECH is clearly important. The % variation in OCR explained by all variables is high in all years.

FORD, FMC, SYLVANIA COMBINED (APPENDIX 14C)

RSQ CHANGE (% OF VARIATION IN OUTCOME EXPLAINED BY VALUE SHOWN)

YEARS	3	6	9	12	15	18
CETECH	-	-	-	-	-	-
CEBUS	-	-	-	-	-	2
DRIVE	12	12	12	12	12	12
PH.D.	-	-	-	-	-	-
M.S.	-	-	-	-	-	-
IGPA	-	-	-	-	-	-
ISH	-	-	-	-	-	-

TOTAL % VARIATION IN OUTCOME EXPLAINED BY ALL VARIABLES

14	15	15	15	15	15

Only DRIVE, which is strong and positive, survives the disparity between organizations. The % variation in OCR explained by all variables is small.

SUMMARY - There is no question but that DRIVE is the single most important positive predictor of the attitude of Chief Engineers in all organizations. At FMC and Ford, CEBUS is positively correlated and is important but does not contribute much to explaining the variance. On the other hand, at Sylvania, CETECH is positively correlated and very important, whereas CEBUS is about as important and always negative. The disparity in the results from the different groups causes the results for the combined group to show a clear carry-over pattern only with DRIVE. Why is Sylvania so much different than FMC and Ford in relation to how CEBUS and CETECH relate to OCR?

D. OCT (TECHNICAL JOB CHALLENGE)

FORD (APPENDIX 10D)

RSQ CHANGE (% OF VARIATION IN OUTCOME EXPLAINED BY VALUE SHOWN)

YEARS	3	6	9	12	15	18
CETECH	-	-	-	-	8	-
CEBUS	-	-	-	-	3(-)	-
DRIVE	-	-	-	-	-	9
PH.D.	-	-	-	-	-	-
M.S.	-	-	-	6(-)	-	9(-)
IGPA	-	-	8(-)	-	-	-
ISH	-	-	-	-	-	8

TOTAL % VARIATION IN OUTCOME EXPLAINED BY ALL VARIABLES

2	3	11	10	15	29

Clearly no useful pattern here.

NASA (APPENDIX 11C)

RSQ CHANGE (% OF VARIATION IN OUTCOME EXPLAINED BY VALUE SHOWN)

YEARS	3	6	9	12	15	18
CETECH	3(-)	6(-)	-	-	-	7
CEBUS	-	-	-	-	-	-
DRIVE	-	-	2	-	-	-
PH.D.	4(-)	-	7(-)	-	3(-)	-
M.S.	-	-	-	-	10(-)	11(-)
IGPA	-	-	-	4(-)	5(-)	-
ISH	-	-	-	-	-	3

TOTAL % VARIATION IN OUTCOME EXPLAINED BY ALL VARIABLES

9	9	12	9	22	28

There is a consistent negative pattern with academic variables. CETECH shows a consistent negative pattern in the basic data.

FMC (APPENDIX 12D)

RSQ CHANGE (% OF VARIATION IN OUTCOME EXPLAINED BY VALUE SHOWN)

YEARS	3	6	9	12	15	18
CETECH	-	-	-	-	-	3(-)
CEBUS	-	4	2(-)	2(-)	-	-
DRIVE	-	-	10(-)	9(-)	11(-)	20(-)
PH.D.	-	-	-	-	2(-)	-
M.S.	3	2(-)	2(-)	-	-	-
IGPA	-	6(-)	4(-)	-	-	-
ISH	10(-)	-	3	-	-	10

TOTAL % VARIATION IN OUTCOME EXPLAINED BY ALL VARIABLES

17	13	23	12	16	38

This shows a very strong negative pattern with DRIVE and a weak negative pattern with academic variables. CETECH shows a consistent negative pattern in the basic data.

SYLVANIA (APPENDIX 13D)

RSQ CHANGE (% OF VARIATION IN OUTCOME EXPLAINED BY VALUE SHOWN)

YEARS	3	6	9	12	15	18
CETECH	-	4(-)	12	-	-	11
CEBUS	-	3	2	-	7(-)	-
DRIVE	-	4	3	-	2	-
PH.D.	-	11(-)	10(-)	9(-)	6(-)	5(-)
M.S.	-	4(-)	4(-)	-	-	-
IGPA	-	-	6	-	-	-
ISH	11(-)	-	-	-	-	33(-)

TOTAL % VARIATION IN OUTCOME EXPLAINED BY ALL VARIABLES

15	27	38	11	18	54

Academic variables show a strong negative pattern. DRIVE shows a weak positive pattern. CE is mixed.

ALL COMBINED (APPENDIX 14D)

RSQ CHANGE (% OF VARIATION IN OUTCOME EXPLAINED BY VALUE SHOWN)

YEARS	3	6	9	12	15	18
CETECH	-	-	-	-	-	-
CEBUS	-	-	-	-	-	-
DRIVE	-	-	-	-	-	-
PH.D.	-	-	2(-)	-	-	-
M.S.	-	4(-)	-	4(-)	4(-)	-
IGPA	-	-	4(-)	-	-	2(-)
ISH	3(-)	-	-	-	-	-

TOTAL % VARIATION IN OUTCOME EXPLAINED BY ALL VARIABLES

6	8	6	6	9	6

The weak negative correlation pattern with academic variables persists. CETECH in the basic data is persistently very weakly negatively correlated.

SUMMARY - The negative correlations shown between academic attainment and technical job challenge largely bear out the conclusions from the bi-variate data. DRIVE shows significantly different patterns between organizations. For Sylvania, the higher the DRIVE the greater the technical challenge (this is a weak relationship). At FMC the reverse is true. FMC shows strong negative correlations between DRIVE and technical job challenge. The relationships shown with CETECH are consistently very weak but always negative.

E. OCM (MANAGEMENT JOB CHALLENGE)

FORD (APPENDIX 10E)

RSQ CHANGE (% OF VARIATION IN OUTCOME EXPLAINED BY VALUE SHOWN)

YEARS	3	6	9	12	15	18
CETECH	-	-	-	-	4(-)	-
CEBUS	-	-	4(-)	4(-)	-	16(-)
DRIVE	-	-	2(-)	3(-)	-	-
PH.D.	-	-	-	3	-	-
M.S.	-	-	-	-	-	3(-)
IGPA	6	4	-	-	-	-
ISH	-	-	-	3(-)	12(-)	-

TOTAL % VARIATION IN OUTCOME EXPLAINED BY ALL VARIABLES

10	9	9	16	17	23

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CEBUS is consistently negatively correlated. Academic variables are mixed.

NASA (APPENDIX 11D)

RSQ CHANGE (% OF VARIATION IN OUTCOME EXPLAINED BY VALUE SHOWN)

YEARS	3	6	9	12	15	18
CETECH	4	3	-	-	8	-
CEBUS	-	-	6(-)	6(-)	15(-)	16(-)
DRIVE	-	-	-	3(-)	-	-
PH.D.	-	-	2(-)	-	-	6(-)
M.S.	-	-	5	-	9(-)	-
IGPA	7(-)	-	-	2	-	5
ISH	3(-)	2	-	-	-	-

TOTAL % VARIATION IN OUTCOME EXPLAINED BY ALL VARIABLES

18	10	15	13	34	29

CEBUS shows a very strong negative pattern. The pattern with academic variables is mixed.

FMC (APPENDIX 12E)

RSQ CHANGE (% OF VARIATION IN OUTCOME EXPLAINED BY VALUE SHOWN)

YEARS	3	6	9	12	15	18
CETECH	-	-	-	5(-)	-	4(-)
CEBUS	-	-	8(-)	3(-)	-	9(-)
DRIVE	13(-)	6(-)	9(-)	-	2(-)	-
PH.D.	-	3(-)	-	-	8	4
M.S.	13	4	3	-	-	-
IGPA	5(-)	-	-	3	5(-)	3(-)
ISH	-	-	-	-	-	5

TOTAL % VARIATION IN OUTCOME EXPLAINED BY ALL VARIABLES

33	14	23	13	20	23

There are clear negative patterns with DRIVE and with CEBUS. Academic results are mixed, with MS showing a positive pattern and IGPA being largely negative.

SYLVANIA (APPENDIX 13E)

RSQ CHANGE (% OF VARIATION IN OUTCOME EXPLAINED BY VALUE SHOWN)

YEARS	3	6	9	12	15	18
CETECH	-	-	18(-)	-	-	5(-)
CEBUS	-	5	10(-)	4(-)	9(-)	-
DRIVE	-	3	-	-	-	7(-)
PH.D.	-	-	15	6	6(-)	3
M.S.	3	-	-	3	9	-
IGPA	-	-	-	-	-	-
ISH	7(-)	10	-	2(-)	12(-)	-

TOTAL % VARIATION IN OUTCOME EXPLAINED BY ALL VARIABLES

14	19	46	17	40	20

The pattern with CEBUS is largely negative. Ph.D. shows mostly a positive pattern. MS shows a positive pattern and ISH mostly a negative pattern--all very confusing.

ALL COMBINED (APPENDIX 14E)

RSQ CHANGE (% OF VARIATION IN OUTCOME EXPLAINED BY VALUE SHOWN)

YEARS	3	6	9	12	15	18
CETECH	-	-	-	-	-	-
CEBUS	-	-	5(-)	4(-)	4(-)	5(-)
DRIVE	-	-	-	-	-	3(-)
PH.D.	-	-	-	-	-	-
M.S.	-	-	-	-	-	-
IGPA	-	-	-	-	-	-
ISH	-	-	-	-	-	-

TOTAL % VARIATION IN OUTCOME EXPLAINED BY ALL VARIABLES

3	2	8	8	7	9

What survives is a consistent but weak negative pattern with CEBUS.

SUMMARY - A pattern of weak negative correlations persists between management job challenge and CEBUS. DRIVE is also consistently negatively related but much less strongly except in the case of FMC. This FMC pattern with DRIVE is very similar to the strong negative pattern shown by FMC between DRIVE and OCT and this differentiates FMC from the other organizations.

Academic variables are mixed and cannot be used as good predictors of management job challenge.

VII MULTIPLE REGRESSIONS - CREDIT vs. NON CREDIT, CE AT-EMPLOYERS vs. NOT-AT-EMPLOYERS, ACADEMIC vs. NON ACADEMIC INSTRUCTION

Along with all of the other data gathered, information was obtained from each engineer as to whether the CE which he documented was taken for-credit or not-for-credit; whether it was taken where he worked or at some other location; and whether the instruction was given by a member of some academic faculty or by a non-academic related instructor. This auxiliary information is all considered hard data.

The reason for obtaining these data is simple. Many people believe that credit courses, with the required homework, testing, grading, experienced academic instruction, etc. are by far a more meaningful educational experience than non-credit courses. There are many others who believe just the opposite, even though non-credit courses do not necessarily require testing and grading, often have no set academic standards, are often taught by instructors who are not a regular member of some university faculty and are often very narrowly oriented toward specific problem solving situations. The question is--is it possible to show a measurable difference in the effect of these different types of courses, course locations and types of instructors on performance? To show these effects--if any--a series of multiple regressions were calculated for each organization separately and then all combined. These regressions were performed using only CETECH as the control variable and then looking at various outcomes as a function of the type of course, location and type of instruction. Only primary outcome variables were investigated.

1. OAC (ABSOLUTE COMPENSATION) VS. CREDIT/NON-CREDIT CETECH
   FORD (APPENDIX 15E) - None of these results explain more than 11% of the variance. Note, however, that all credit CETECH is negatively correlated, whereas the non-credit CE results are mixed. The basic results are not useful except to show these trends.

NASA (APPENDIX 16E) - Years 6 through 18 are very meaningful. Non-Credit CETECH very strongly positively explains up to 47% of the variance and is at least 25 times more important than Credit CETECH.

FMC (APPENDIX 17E) - Except in Year 18, Non-Credit CETECH is always positively correlated and explains up to 16% of the variance. It is always significantly more important than Credit CETECH (1.5 - 3 times) except when Credit CETECH is negatively correlated.

SYLVANIA (APPENDIX 18E) - Only Years 9 through 18 are meaningful. In Years 15 and 18, Credit CETECH is negatively correlated but contributes relatively little to explaining the variance. Non-Credit CETECH in those years is positively correlated and explains up to 33% of the variance. However, in Years 9 and 12, both types of CETECH are positively correlated and Credit CETECH dominates and explains up to 26% of the variance.

ALL COMBINED (APPENDIX 19E) - Only Years 9 through 18 are meaningful. In these years, Non-Credit CETECH is always positively correlated, is always dominant and explains up to 22% of the variance. In two of these years, Credit CETECH is negatively correlated. The ratio of contribution to explaining the variance between Non-Credit and Credit CETECH ranges from about 10:1 to 100:1.

SUMMARY - Non-Credit CETECH is by far a better predictor of absolute compensation than Credit CETECH. Correlations with Non-Credit CETECH are moderate-strong and largely positive, whereas those with credit CETECH, are mostly weak and often negative. Non-Credit CETECH is clearly the dominant factor but is not useful as a predictor in the early years (3 and 6).

2. ORC (RELATIVE COMPENSATION) VS. CREDIT/NON-CREDIT CETECH

FORD (APPENDIX 15A) - The results are confused and not useful.

NASA (APPENDIX 16A) - Non-Credit CETECH contributes positively up to 27% to explanation of the variance. Credit CETECH contributes at most 3.5%. The ratios of the contributions of Non-Credit to Credit CETECH range from about 5:1 to 150:1.

FMC (APPENDIX 17A) - The results are confused and not useful.

SYLVANIA (APPENDIX 18A) - The results are confused and not useful.

ALL COMBINED (APPENDIX 19A) - The data for Years 3, 6, 15 and 18 show little explanation of the variance. In Years 9 and 12, both Credit and Non-Credit CETECH are positively correlated. Non-Credit CETECH explains up to 9% of the variance and is considerably more important than Credit CETECH.

SUMMARY - Except in the case of NASA, CETECH is a very poor predictor of relative compensation. In the NASA case, Non-Credit CETECH participation is moderately-strongly positively correlated with relative compensation and is far more important than Credit CETECH.

3. ORC (RELATIVE COMPENSATION) VS. LOCATION OF CETECH PARTICIPATION

FORD (APPENDIX 15B) - No useful results.

NASA (APPENDIX 16B) - CETECH - Not-At-Employers contributes positively up to 26% of the variance. At-Employers explains at most 4%. The ratios of the contributions of CETECH Not-at-Employers to At-Employers range from about 5:1 to 40:1.

FMC (APPENDIX 17B) - No useful results.

SYLVANIA (APPENDIX 18B) - No useful results.

ALL COMBINED (APPENDIX 19B) - CETECH Not-at-Employers contributes positively to explaining up to 8% of the variance. In Years 9 and 12, where the contributions to explaining variance are meaningful, CETECH Not-At-Employers is about 10 times more important than CETECH At-Employers.

SUMMARY - The ORC variable is again not a good measuring tool except in the case of NASA. However, the indications show CETECH participation away-from-employers location as being dominant compared to CETECH participation at work in predicting relative compensation.

4. ORC (RELATIVE COMPENSATION) VS. TYPE OF INSTRUCTOR

FORD (APPENDIX 15C) - No useful results.

NASA (APPENDIX 16C) - CETECH participation with Non-Academic instructors contributes positively to explaining up to 27% of the variance. Academic instructors explain at most 3.5%. The ratios of the contributions of Non-Academic to Academic instructors range from about 5:1 to 50:1.

FMC (APPENDIX 17C) - No useful results.

SYLVANIA (APPENDIX 18C) - No useful results.

ALL COMBINED (APPENDIX 19C) - The results here are marginal. They do show CETECH participation with Non-Academic instructors being dominant in Years 9 and 12 and explaining up to 9% of the variance, although the reverse is true in Year 6 where CE participation with Academic instructors explains 4% of the variance.

SUMMARY - Again, except in the case of NASA, ORC is not too useful as an outcome measure. The indications seem to be that CETECH instruction by Non-Academic instructors is more important in determining relative compensation than CETECH instruction by Academic instructors.

5. OSP (NUMBER OF PERSONS SUPERVISED) VS. CREDIT/NON-CREDIT CETECH - The data for Ford (Appendix 15D), NASA (Appendix 16D), FMC (Appendix 17D), Sylvania (Appendix 18D) and All Combined (Appendix 19D) show very weak correlations throughout. However, the pattern of negative correlation between OSP and both Credit and Non-Credit CETECH participation, while weak, is nevertheless clear and persistent and supports the results from the bi-variate data. Unfortunately, no regressions were calculated for OSP vs. Credit/Non-Credit CEBUS. These might have shown a relationship with OSP paralleling that of CETECH with OAC.

6. OVERALL SUMMARY - Non-Credit CETECH shows dominant positive relationships in determining compensation performance relative to Credit CETECH. These relationships should be expected from results previously reported here, because after Year 6 the vast preponderence of CE was taken not-for-credit. During Years 3 and 6, those engineers who are seeking MS degrees as part-time students are taking mostly

courses for credit. However, it is of interest to note that even in Years 3 and 6, the total participation in Non-Credit CE significantly exceeds that in Credit CE.

These data also show that, at least for the four organizations included in the Study, in-house educational offerings were less important than those away from work.

While this Study in no way compares the relative effectiveness of academic related instructors to others, it does show that non-academic related instructors teaching Non-Credit CETECH to engineers are having a positive effect on their performance. It is not possible to say that the effect would have been different if the instructors were all academicians. But, people involved in offering Non-Credit CE in engineering can, on the whole, feel good about the effectiveness of their efforts.

It cannot be concluded that Non-Credit CE is better than Credit CE in determining job performance. The disparity in levels of participation make such a conclusion impossible.

VIII - ATTITUDINAL RESPONSES (APPENDIX 20)

Attitudinal responses are shown for each organization separately and for all combined. Not all engineers responded to the attitudinal questions. Specifically, the responses are Ford (94%), NASA (100%), FMC (90%), Sylvania (96%).

1. OAJP Attitude about Job Performance (Appendix 20A)

	FORD	NASA	FMC	SYLVANIA	ALL COMBINED
% having large negative effect	0	0	0	0	0
% having small negative effect	3	1	1	1	2
% having no effect	10	10	5	7	8
% having small positive effect	57	38	58	63	54
% having large positive effect	31	52	36	29	37

The data show remarkable consistency. Some 91% of the people believe CE has had small to large positive effect and 29-52% believe in a large positive effect. Also, NASA engineers are more positive than the others. Only about 10% believe CE has no effect or a negative effect on performance.

2. OAJA Attitude about Job Assignment (Appendix 20B)

	FORD	NASA	FMC	SYLVANIA	ALL COMBINED
% having large negative effect	0	0	0	0	0
% having small negative effect	1	1	1	0	1
% having no effect	31	14	33	34	28
% having small positive effect	49	47	46	48	47
% having large positive effect	20	38	21	19	24

These data show a remarkable consistency in that, in all organizations, almost 50% of the people believe CE participation has a small positive effect on attitude. In the private sector, about 20% believe CE has a large positive effect whereas at NASA almost twice the percentage of people believe that. Of the rest, only about 28% believe CE has no effect.

3. OAPA Attitude about Prospects for Advancement (Appendix 20E)

	FORD	NASA	FMC	SYLVANIA	ALL COMBINED
% having large negative effect	0	1	1	0	1
% having small negative effect	1	4	3	0	2
% having no effect	44	32	29	25	34
% having small positive effect	45	40	49	58	47
% having large positive effect	10	24	17	18	16

The pattern begins to show a change. A small build up of negative feeling about CE, more at NASA than for others. Sylvania responses now much more positive than other organizations, all in area of people who believe in a small positive effect on prospects for advancement.

4. OAFY Attitude about Your Feelings about Yourself (Appendix 20F)

	FORD	NASA	FMC	SYLVANIA	ALL COMBINED
% having large negative effect	0	0	0	0	0
% having small negative effect	1	4	1	4	3
% having no effect	20	13	22	13	17
% having small positive effect	47	41	48	44	45
% having large positive effect	32	42	29	40	35

Clearly, about 80% of the respondents feel positively about themselves as a result of CE participation and about 35% feel very positively.

5. OAIP Attitude about Your Intellectual Perspective (Appendix 20G)

	FORD	NASA	FMC	SYLVANIA	ALL COMBINED
% having large negative effect	0	1	0	0	0
% having small negative effect	0	3	1	0	1
% having no effect	21	7	12	11	14
% having small positive effect	48	44	64	46	50
% having large positive effect	31	49	23	43	35

An average of 85% of the people feel positively about their intellectual perspective and 35% feel very positively.

6. OAFW Attitude about Relationship with Fellow Workers (Appendix 20H)

	FORD	NASA	FMC	SYLVANIA	ALL COMBINED
% having large negative effect	0	0	0	0	0
% having small negative effect	1	0	0	0	1
% having no effect	42	30	33	40	37
% having small positive effect	44	54	48	47	48
% having large positive effect	15	15	17	14	15

Again, a very consistent pattern. About 40% with small positive feelings, about 15% with large positive feelings and about 38% neutral. NASA people continue to respond more positively.

7. OAFE Attitude about Your Feelings about Your Employer (Appendix 20I)

	FORD	NASA	FMC	SYLVANIA	ALL COMBINED
% having large negative effect	7	2	2	3	4
% habing small negative effect	11	5	8	6	8
% having no effect	51	32	36	26	38
% having small positive effect	25	32	45	41	35
% having large positive effect	7	29	10	24	16

Now there is a different--and an unexpected pattern. Significant negative feelings about employer relating to CE with the negative pattern at Ford stronger than the others, i.e., as many people feeling very negatively as are feeling very positively. At Ford, only 32% are positive vs. the range 55-65 for the others.

8. CEAJR Job-Related Value of CE (Appendix 20C)

	FORD	NASA	FMC	SYLVANIA	ALL COMBINED
10 - 20%	10	5	6	6	7
30 - 40%	20	10	9	11	13
50 - 60%	32	19	26	34	28
70 - 80%	25	44	34	34	36
90 - 100%	13	23	13	14	15

About 50% of respondents believe that the "job-related" value of their CE rates in the 70-100 percentile in value. Another 28% of respondents rate it in the 50-60% category while 20% of respondents rate it in the 10-40% value category. Again, NASA people are more positive than others.

9. CEAIS Stimulation Value of C.E. (Appendix 20D)

	FORD	NASA	FMC	SYLVANIA	ALL COMBINED
10 - 20%	7	3	9	9	7
30 - 40%	12	8	10	13	11
50 - 60%	22	18	20	20	20
70 - 80%	37	36	49	27	38
90 - 100%	22	36	12	32	26

The pattern for "stimulation" value of CE is stronger than for "job-related" value. Here, about 64% rate the "stimulation" value in the 70-100% range with 26% rating it in the 90-100 percentile range vs. 15% for "job-related" value. NASA people, again, report more positively.

10. POLICY POSITION RELATIVE TO CE (What % of CE should be job related) (Appendix 20J)

	FORD	NASA	FMC	SYLVANIA	ALL COMBINED
0	10	4	5	4	6
10 - 30	12	2	4	12	8
31 - 50	26	18	32	27	28
51 - 70	12	18	4	10	11
71 - 90	19	41	30	35	30
100	23	16	26	11	19

About 40% of the respondents would establish a policy that would require 50% or less of CE to be job-related. About 6% wouldn't require any of it to be job-related while 19% would require all of it to be job-related. NASA people are at one end of the spectrum. 75% of their people would require 50% or more to be job-related.

11. CONCLUSIONS FROM ATTITUDINAL RESPONSES

The following conclusions might be drawn from the results of these attitudinal responses:

A. Policy Position Relative to % of CE Which Should Be Job Related

The opinions expressed in this area must be viewed in the context that all of the participating organizations have a policy which requires CE to be job related or degree related in order to obtain organizational support for participation. Only an average of 19% of the respondents support this position. About 40% would support a position that only 50% or less should be job related. Clearly, there is a dichotomy between organizational educational support policy and what people believe the policy should be. This may account for some of the dissatisfaction expressed relating to "attitudes about employer".

B. Job Related and Stimulation Value of C.E.

Clearly, the preponderence of respondents rate highly the "job related" value of their C.E. participation. They rate even more highly the "stimulation" value of their C.E., i.e., 50% more people rate "stimulation" over "job related" in the highest category. If it is "stimulation" which is rated most important, this again raises questions about organizational policies which require all C.E. to be job related.

C. Attitudinal Responses

Assume that a measure of whether or not a person has achieved career success is how good they feel about themselves, how good they feel about their job and how good they feel about their employer. In this context, as a result of CE participation, 80% had positive feelings about themselves and 85% had positive feelings about their intellectual perspective. The negative feelings expressed in these areas were respectively 3% and 5%. As related to their job, 71% were positive about job assignments, 91% were positive about job performance, 63% were positive about prospects for advancement, and 63% were positive about relationships with fellow workers. The negative feelings in these same areas were respectively 1%, 2%, 3% and 1%. However, as related to feelings about employers, only 51% were positive and 12% were negative. Clearly, these respondents felt more successful as a result of CE with respect to themselves and their job--but what about their feelings about their employer? Every one of the employers supports CE to hopefully achieve positive results in terms of performance and attitudes--and yet there is clearly some unhappiness towards the employer being generated in the process. It would appear worthwhile for these reasons to be surfaced and the problems (real or imaginary) addressed. Part of the reason may relate to the negative relationships surfaced by this Study between "job challenge" and CE participation.

IX CROSS-CORRELATIONS OF KEY OUTCOME VARIABLES - OAC/ORC/OSP/OCR

Figure 20 summarizes the cross-correlations of significance between the key outcome variables OAC/ORC/OSP/OCR.

1. Cross-Correlations with OCR

All Combined - Correlations of significance are shown in two or more years with ORC only and these are mixed in sign--although years 15 and 18 are both negative and moderately strong.

Ford - Years 15 and 18 both show negative moderately strong correlations with ORC.

FMC - Correlations with ORC are moderately strong but mixed. Moderately strong postive correlations are shown with OSP.

Sylvania - While very strong positive correlations are shown with ORC in years 12 and 15, the sample size (7-8) is too small to allow reliable conclusions.

2. Cross-Correlations with ORC

All Combined - Years 9 and 12 show weak positive correlations with OAC.

Ford - No pattern shown.

NASA - Shows a clear pattern of positive strong correlations with OAC.

FMC - No pattern shown.

Sylvania - Positive moderately strong correlations are shown with OSP.

3. Cross-Correlations with OSP

All Combined - Weak positive correlations are shown with OAC in years 15 and 18.

Ford - Moderately strong positive correlations are shown with OAC in three periods.

NASA - No pattern shown.

FMC - No pattern shown.

Sylvania - No pattern shown.

4. Summary

The expected patterns of strong positive correlations between growth in supervisory responsibility (OSP) and growth in compensation (OAC) or relative compensation (ORC) aren't there. Except for Ford and, to a lesser extent, All-Combined, OSP and OAC show no patterns of significant positive correlations. However, at Sylvania, a pattern of significant positive correlations is shown between OSP and ORC. This could mean that the dominant positive correlations shown between CETECH and OAC are based more on growth in technical, rather than supervisory responsibility--at least in some organizations. And, since CETECH and OSP are not highly correlated, it could also mean that engineers need not divert into a management path in order to achieve economic growth--but this also seems to be organization sensitive.

	YEARS					
	3	6	9	12	15	18
ALL COMBINED						
OCR vs. ORC	---	---	+0.289	---	-0.292	-0.351
OCR vs. OSP	---	---	---	---	+0.188	---
OCR vs. OAC	---	---	---	+0.226	---	---
ORC vs. OSP	---	---	---	---	---	---
ORC vs. OAC	---	---	+0.190	+0.306	---	---
OSP vs. OAC	---	---	---	---	+0.288	+0.224
FORD						
OCR vs. ORC	---	---	---	---	-0.375	-0.452
OCR vs. OSP	---	---	---	---	---	---
OCR vs. OAC	---	---	---	---	---	+0.417
ORC vs. OSP	---	---	---	---	---	---
ORC vs. OAC	---	---	+0.234	---	---	---
OSP vs. OAC	---	---	+0.356	---	+0.423	+0.397
NASA						
ORC vs. OSP	---	---	---	---	---	+0.334
ORC vs. OAC	---	---	+0.460	+0.600	+0.604	+0.624
OSP vs. OAC	+0.392	---	---	---	---	---
FMC						
OCR vs. ORC	---	---	+0.373	---	---	-0.378
OCR vs. OSP	+0.295	---	---	+0.331	---	---
OCR vs. OAC	---	---	---	---	---	---
ORC vs. OSP	---	---	---	---	---	---
ORC vs. OAC	---	---	---	---	---	---
OSP vs. OAC	---	---	---	---	---	---
SYLVANIA						
OCR vs. ORC	---	---	---	+0.836 (7)	+0.659 (8)	---
OCR vs. OSP	---	---	---	---	---	---
OCR vs. OAC	---	---	---	---	---	---
ORC vs. OSP	---	+0.416	+0.442	---	---	---
ORC vs. OAC	---	---	---	---	---	+0.340
OSP vs. OAC	---	---	---	---	---	---

CROSS-CORRELATIONS OF KEY OUTCOME VARIABLES
OAC/ORC/OSP/OCR

FIGURE 20

X - STUDY RESULTS

The Study results are summarized in the Executive Summary (pages 5 - 9) of this Report.

XI - SUMMARY AND CONCLUSIONS

The Summary and Conclusions are contained in the Executive Summary (pages 9 - 13) of this Report.

XII - UNANSWERED QUESTIONS RAISED BY STUDY

1. To what extent can the results of this Report be generalized? Is a larger scale Study incorporating more people, more organizations, more industries and other geographic locations called for?

2. Can the ROI to employers reasonably be deduced from the results obtained in this Study on individuals? If not, is it worth trying to determine the ROI to employers? Is it possible?

3. What are the causes of the negative feelings towards their employers expressed by many engineers as a result of their participation in CE? Is it worth trying to ascertain these causes? Is it possible?

4. Why does NASA show such strong positive correlations between ORC and CE and the other organizations show so little?

5. Why is CETECH so consistently (but weakly) negatively correlated with supervisory responsibility?

6. Despite the low level of participation in other CE, as compared to technical and business CE, other CE shows significant positive correlations with compensation. It raises the question of what the results might be from a controlled experiment where different groups of participants experienced equal levels of technical, business and other CE.

7. Why do positive bi-variate correlations between CE and compensation at Sylvania, and only at Sylvania, persist only within groups of lower ability?

8. Why do FMC and Sylvania show such positive correlations between CEBUS and supervisory responsibility and NASA and Ford show so little?

9. Why do the Chief Engineers ratings at Sylvania correlate so strongly and positively with CETECH and so negatively with CEBUS, while the Chief Engineers ratings at FMC and Ford show no correlations at all with CETECH and positive correlations with CEBUS?

10. Why do all of the M.S. participants show strong negative correlations between OCR and CEOTH?

11. Why is DRIVE so strongly negatively correlated with both OCT and OCM at FMC, a pattern quite different from the other organizations?

Perhaps the most difficult question of all relates to the relative contributions of CE vs. inherent ability and DRIVE in determining outcomes. Certainly the results shown are markedly different than originally anticipated. This Study advances no reasons for these findings, but it would be very comforting if a valid explanation could be surfaced.

Definitions

Engineer:	a currently employed person with at least three (3) years service who has a baccalaureate, or higher, degree in an *engineering* discipline, whether working as an engineer or not,
or,	a currently employed person with at least three (3) years service, with or without a formal degree in a non-engineering discipline but working as an engineer.
	(The term "working as an engineer" is left open to the interpretation of participating organizations. But, it is intended to eliminate technicians or technologists from being included in the study. At the same time, it must include managers and individuals with engineering degrees who are not working as engineers.)
Continuing Education: CEE	any course/program formally constituted as an educational program of at least 4 hours duration which is designed to cover a given subject, subject area, or to accomplish a specific goal and requiring attendance or participation over a specified period of time, which is taken after beginning full-time employment as an engineer.
	(This definition knowingly sets aside many other significant learning experiences such as professional society meetings, papers, journal article reading, etc.)
First or Early Years Supervisor:	The first supervisor is the man to whom the individual engineer reported when first employed by his *present* employer at the *present* location. If that first supervisor is no longer employed by the organization, then the "early years supervisor" is the first person still employed by the organization who supervised the engineer in question during his early years with the organization. The intent is to get a reading on the engineer during his formative years and compare it with the opinions of the engineer's present supervisor.
Present Supervisor:	This requires no explanation. However, in the case of some engineers, their present supervisor is the same individual as the "first or early years supervisor." In such cases, *both* Questionnaires should be completed and they will hopefully reflect two views, different in time, relative to the same individual.

APPENDIX 1 A

Variables List

Outcome Variables

ORC Relative compensation index

$\mathrm{ORC} = \frac{1}{T} \underset{T}{\text{sum}}\ Zit$, t represents 1 year time intervals, thus,

t = 2, 3, 4...
i = engineer index number
T = total time (i.e., max t) or selected intervals (i.e., 3 years)
N = total engineers

$$\text{where } Z\,it = \left[\frac{Yit}{\frac{1}{N}\underset{1}{\text{sum}}\ Yit} - 1\right] 10 \qquad \text{and } Yit = \frac{Xit - Xi(t-1)}{Xi\,(t-1)}$$

Xit represents the compensation adjusted by consumer-price index
Yit represents the compensation percentage increase from the (t-1)th time interval to the (t)th time interval for the (i)th engineer
Compensation refers to salary + bonuses

OAC	Absolute compensation adjusted by consumer-price index
OSP	Number of persons supervised
OCR	Chief engineer's ranking
OPT	Number of patents
OPB	Number of publications
OCT	Technical job challenge
OCM	Management job challenge
OAJA	Attitude about job assignment
OAJP	Attitude about job performance
OAFW	Attitude about relationship with fellow workers
OAPA	Attitude about prospects for advancement
OAFY	Attitude about your feelings about yourself
OAIP	Attitude about your intellectual perspective
OAFE	Attitude about your feelings about your employer
CEAJR	Attitude about how CE is job related
CEAIS	Attitude about how intellectually stimulating CE is
POLICY	Policy for kind of CE

Continuing Education Variables

CETOT	Total hours of all continuing education (cumulative total of contact hours)
CETECH	Total technical continuing education hours " "
CEBUS	Total business continuing education hours " " "
CEOTH	Total other continuing education hours " " "

Ability Variables

IPR	Present supervisor report
IFR	First or early years supervisor report
IGPA	BS undergraduate gpa
ISCH	School
ISH	Academic honors
OCR	Chief engineer's ranking
Ph.D.	Having a Doctor's Degree
MS	Having a Master's Degree

Other Variables

TEMPLY	Year of first full time employment after last degree as full time student
DRIVE	Work agressively and diligently and spend extra hours when required

APPENDIX 1B

Questionnaire to be completed by Personnel Department

1

Organization Code No. ☐☐ Division Code No. D V ☐☐

Department Code No. D P ☐☐☐ Individual's Code No. I ☐☐☐☐

TO BE COMPLETED FOR ALL SURVEYED ENGINEERS

Year	1 Base Pay Rate Annual*	2 Base Pay Rate Monthly*	3 Special Bonus**	4 Job Performance***
1975	☐☐☐☐☐	☐☐☐☐	☐☐☐☐	☐
1974	☐☐☐☐☐	☐☐☐☐	☐☐☐☐	☐
1973	☐☐☐☐☐	☐☐☐☐	☐☐☐☐	☐
1972	☐☐☐☐☐	☐☐☐☐	☐☐☐☐	☐
1971	☐☐☐☐☐	☐☐☐☐	☐☐☐☐	☐
1970	☐☐☐☐☐	☐☐☐☐	☐☐☐☐	☐
1969	☐☐☐☐☐	☐☐☐☐	☐☐☐☐	☐
1968	☐☐☐☐☐	☐☐☐☐	☐☐☐☐	☐
1967	☐☐☐☐☐	☐☐☐☐	☐☐☐☐	☐
1966	☐☐☐☐☐	☐☐☐☐	☐☐☐☐	☐
1965	☐☐☐☐☐	☐☐☐☐	☐☐☐☐	☐
1964	☐☐☐☐☐	☐☐☐☐	☐☐☐☐	☐
1963	☐☐☐☐☐	☐☐☐☐	☐☐☐☐	☐
1962	☐☐☐☐☐	☐☐☐☐	☐☐☐☐	☐
1961	☐☐☐☐☐	☐☐☐☐	☐☐☐☐	☐

* Fill in *only* Column 1 *or* Column 2, whichever is available.

** Special Bonus does *not* include organization wide profit sharing. It means a record based on *individual* performance as documented in Personnel records.

*** Job Performance data are to be obtained only from Personnel records.
Use following code:

1 below average or with significant negative comments.

2 average or with no significant comments.

3 above average or with significant positive comments.

4 exceptional or with clearly superior comments.

APPENDIX 2A

Questionnaire to be completed by individual engineer

2

Organization Code No. ☐☐ **Division Code No.** D V ☐☐

Department Code No. D P ☐☐☐ **Individual's Code No.** I ☐☐☐☐ 16

---

1. In what year were you born? 19☐☐ 18
2. In what year did you first accept full-time employment after graduation from college (40 hour/week minimum)? 19☐☐ 20
3. In what year did you start to work full-time *for your present employer?* 19☐☐ 22
4. In what year did you receive the following degrees? If you did not receive one or more of these degrees, put an X in the appropriate box.
   - a. High School Diploma 19☐☐ 24
   - b. A.A. Degree 19☐☐ 26
   - c. Bachelor's Degree 19☐☐ 28
   - d. Master's Degree 19☐☐ 30
   - e. Doctor's Degree 19☐☐ 32
5. What was your grade point average* at the BA/BS level? (See Note 1) ☐.☐ 35
6. Did you receive special honors as an undergraduate, i.e., Phi Beta Kappa, Tau Beta Pi, Eta Kappa Nu, Dean's List, etc.? YES = 1, NO = 2 ☐ 36
7. What was your major field of study? Engineering = 1, Physical Science/Mathematics = 2, Other = 3 ☐ 37
8. What university did you graduate from with a BA/BS Degree? (See Note 2) ☐ 38
9. For how many different employers have you worked full-time since graduation with your last degree as a full-time student? (Include present employer.) ☐ 39

Notes: 1 Based on A = 4.0 If your school was different, please normalize. For example, if an A = 3.0 in your system, multiply your GPA by 1.33 before entering. Use only 2 significant figures.

2 Enter 1 for Lehigh, Piny, Brown, Iowa State, Michigan State, Texas A&M, U.C. Davis, Maryland, USC, Butte, Colorado, Delaware, N. Carolina State, Yale, Oklahoma State.

Enter 2 for Texas-Austin, Wisconsin, Harvard, Minnesota, Ohio State, UCLA, Case-Western, Northwestern.

Enter 3 for MIT, U.C. Berkeley, Stanford, Illinois, Cal Tech, Michigan, Purdue, Carnagie-Mellon, Cornell, Princeton.

Enter 4 for Penn, Rice, Washington (Seattle), Columbia, Georgia Tech, Penn State, Florida, RPI.

Enter 5 for all other Universities & Colleges.

10. In the table below, enter the amounts or codes, as appropriate, for each year shown or back to the year of your first full-time employment. (Please refer to attached instructions.)

	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)
Year	Number of Patents Applied For	Number of Papers Published	Special Cash or Stock Bonus Received (1) Yes (2) No	Special Recognition Received (1) Yes (2) No	Promotion (1) Yes (2) No	Number of Persons Supervised	Favorable Lateral Move within Organization	Kind of Engineer	Area of Work	Job Level	Technical Challenge of Job Assignment	Management Challenge of Job Assignment	Extent of Utilization of Prior Continuing Education
19 75	☐☐	☐☐	☐	☐	☐	☐☐☐☐	☐	☐☐	☐	☐☐	☐	☐	☐
19 74	☐☐	☐☐	☐	☐	☐	☐☐☐☐	☐	☐☐	☐	☐☐	☐	☐	☐
19 73	☐☐	☐☐	☐	☐	☐	☐☐☐☐	☐	☐☐	☐	☐☐	☐	☐	☐
19 72	☐☐	☐☐	☐	☐	☐	☐☐☐☐	☐	☐☐	☐	☐☐	☐	☐	☐
19 71	☐☐	☐☐	☐	☐	☐	☐☐☐☐	☐	☐☐	☐	☐☐	☐	☐	☐
19 70	☐☐	☐☐	☐	☐	☐	☐☐☐☐	☐	☐☐	☐	☐☐	☐	☐	☐
19 69	☐☐	☐☐	☐	☐	☐	☐☐☐☐	☐	☐☐	☐	☐☐	☐	☐	☐
19 68	☐☐	☐☐	☐	☐	☐	☐☐☐☐	☐	☐☐	☐	☐☐	☐	☐	☐
19 67	☐☐	☐☐	☐	☐	☐	☐☐☐☐	☐	☐☐	☐	☐☐	☐	☐	☐
19 66	☐☐	☐☐	☐	☐	☐	☐☐☐☐	☐	☐☐	☐	☐☐	☐	☐	☐
19 65	☐☐	☐☐	☐	☐	☐	☐☐☐☐	☐	☐☐	☐	☐☐	☐	☐	☐
19 64	☐☐	☐☐	☐	☐	☐	☐☐☐☐	☐	☐☐	☐	☐☐	☐	☐	☐
19 63	☐☐	☐☐	☐	☐	☐	☐☐☐☐	☐	☐☐	☐	☐☐	☐	☐	☐
19 62	☐☐	☐☐	☐	☐	☐	☐☐☐☐	☐	☐☐	☐	☐☐	☐	☐	☐
19 61	☐☐	☐☐	☐	☐	☐	☐☐☐☐	☐	☐☐	☐	☐☐	☐	☐	☐

APPENDIX 2B 2

11. Using the Table below, we would like you to code each educational course, or program, you have participated in that fits the definition for "continuing education." If there was none use word "none."

	Year:* Start with 1975 & work back in time to 1961	Length: Enter Hours (Classroom, or contact hours).	Course Type: 1 = Technical (Engineering, Science, Computers, Etc.) 2 = Bus./Mgmt. 3 = Other	Method: 1=Self-study 2 = At the employer's facility 3 = Outside the employer's facility.	Instructor: 1 = Consultant 2 = Academic/Prof. 3 = Key-Employee 4 = Education-Company Employee	Credit: 1 = No 2 = Yes	Grade Assigned: 1 = No 2 = Yes 3 = Yes and part of degree program.	% On Employers Time	Completion Certificate or CEU: 1 = No 2 = Yes	% Cost Paid by Employer	Benefit to You Personally: 1 = Only slightly 2 = Somewhat Valuable 3 = Quite valuable 4 = Extremely valuable	Your Estimate of Benefit to Your Employer: 1 = Only slightly valuable 2 = Somewhat valuable 3 = Quite valuable 4 = Extremely valuable	Support from Supervisor: 1 = Not at all 2 = Only slightly 3 = Somewhat supportive 4 = Highly supportive
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)
19	☐☐	☐☐	☐	☐	☐	☐	☐	☐☐☐ %	☐	☐☐☐ %	☐	☐	☐
19	☐☐	☐☐	☐	☐	☐	☐	☐	☐☐☐	☐	☐☐☐	☐	☐	☐
19	☐☐	☐☐	☐	☐	☐	☐	☐	☐☐☐	☐	☐☐☐	☐	☐	☐
19	☐☐	☐☐	☐	☐	☐	☐	☐	☐☐☐	☐	☐☐☐	☐	☐	☐
19	☐☐	☐☐	☐	☐	☐	☐	☐	☐☐☐	☐	☐☐☐	☐	☐	☐
19	☐☐	☐☐	☐	☐	☐	☐	☐	☐☐☐	☐	☐☐☐	☐	☐	☐
19	☐☐	☐☐	☐	☐	☐	☐	☐	☐☐☐	☐	☐☐☐	☐	☐	☐
19	☐☐	☐☐	☐	☐	☐	☐	☐	☐☐☐	☐	☐☐☐	☐	☐	☐
19	☐☐	☐☐	☐	☐	☐	☐	☐	☐☐☐	☐	☐☐☐	☐	☐	☐
19	☐☐	☐☐	☐	☐	☐	☐	☐	☐☐☐	☐	☐☐☐	☐	☐	☐
19	☐☐	☐☐	☐	☐	☐	☐	☐	☐☐☐	☐	☐☐☐	☐	☐	☐
19	☐☐	☐☐	☐	☐	☐	☐	☐	☐☐☐	☐	☐☐☐	☐	☐	☐
19	☐☐	☐☐	☐	☐	☐	☐	☐	☐☐☐	☐	☐☐☐	☐	☐	☐
19	☐☐	☐☐	☐	☐	☐	☐	☐	☐☐☐	☐	☐☐☐	☐	☐	☐
19	☐☐	☐☐	☐	☐	☐	☐	☐	☐☐☐	☐	☐☐☐	☐	☐	☐

*Write in years for each course.

12. Shown below are some overall outcomes that may have resulted from your participation in continuing education. Please code the degree of effect which you personally believe continuing education seems to have had on each. In addition, in the right hand column, alongside any category in which you may have checked "large positive effect," please estimate the percentage of courses taken which had this large effect.

	Large Negative Effect 1	Small Negative Effect 2	No Effect 3	Small Positive Effect 4	Large Positive Effect 5	%
a. The challenge of your various job assignments.	☐	☐	☐	☐	☐	☐☐☐ % 21
b. Your job performance.	☐	☐	☐	☐	☐	☐☐☐ % 25
c. Your relationship with fellow workers.	☐	☐	☐	☐	☐	☐☐☐ % 29
d. Your prospects for advancement.	☐	☐	☐	☐	☐	☐☐☐ % 33
e. Your feelings about yourself.	☐	☐	☐	☐	☐	☐☐☐ % 37
f. Your intellectual perspective.	☐	☐	☐	☐	☐	☐☐☐ % 41
g. Your feelings about your employer.	☐	☐	☐	☐	☐	☐☐☐ % 45

13. Your continuing education experiences may have been job related, or they may have served primarily for mental stimulation and intellectual growth—or perhaps both. On a scale of 1 to 10, with 10 being the *most* valuable, please code your continuing education in terms of:

	01	02	03	04	05	06	07	08	09	10
Its "job related value": h.	0 ☐	0 ☐	0 ☐	0 ☐	0 ☐	0 ☐	0 ☐	0 ☐	0 ☐	1 ☐
Its "stimulation value": i.	0 ☐	0 ☐	0 ☐	0 ☐	0 ☐	0 ☐	0 ☐	0 ☐	0 ☐	1 ☐

14. If you set management policy for providing financial support for continuing education, would you:

j. require all of it to be job related? YES - 1 NO - 2 ☐ 50

k. require none of it to be job related? YES - 1 NO - 2 ☐ 51

l. require some percentage of it to be job related? YES - 1 NO - 2 ☐ 52

If yes, specify percentage ☐☐☐ % 55

Questionnaire to be completed by Chief Engineer (or equivalent)

3

Organization Code No. ☐☐

Division Code No. DV☐☐☐

Department Code No. DP☐☐☐☐

---

1. The following is my ranking of all engineers working under my overall direction.

The total of these is ☐☐☐☐

Ranking	Engineer's Code No.	Ranking	Engineer's Code No.	Ranking	Engineer's Code No.
	I		I		I
	I		I		I
	I		I		I
	I		I		I
	I		I		I
	I		I		I
	I		I		I
	I		I		I
	I		I		I
	I		I		I
	I		I		I
	I		I		I
	I		I		I
	I		I		I
	I		I		I
	I		I		I
	I		I		I
	I		I		I
	I		I		I
	I		I		I
	I		I		I

(over)

APPENDIX 2C

Ranking	Engineer's Code No.	Ranking	Engineer's Code No.	Ranking	Engineer's Code No.
	I		I		I
	I		I		I
	I		I		I
	I		I		I
	I		I		I
	I		I		I
	I		I		I
	I		I		I
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	I		I		I
	I		I		I
	I		I		I
	I		I		I
	I		I		I
	I		I		I

Questionnaire to be completed by first or early years supervisor

4

Organization Code No. ☐☐ **Division Code No.** D V ☐☐

Department Code No. D P ☐☐☐ **Individual's Code No.** I ☐☐☐☐ 17

---

1. The questions in (2) below are designed to provide a measure of inherent ability. They have nothing to do per se with the Study's measures of continuing education or performance.
2. Below you will find a rating scale opposite a list of personal attributes. Please check the box on each that seems to best fit your evaluation of the individual named on the cover sheet.

	Rate Person's Ability to:	Extremely high 1	Quite high 2	Average 3	Not very high 4	Poor 5	Not Observed or Not Applicable 6		JUDGMENTAL WEIGHTING FACTORS
a	Ask relevant questions.	☐	☐	☐	☐	☐	☐	18	0.8
b	Get job done in best way, at least cost.	☐	☐	☐	☐	☐	☐	19	1.0
c	Clearly define job requirements.	☐	☐	☐	☐	☐	☐	20	0.8
d	Apply current state of the art technical knowledge.	☐	☐	☐	☐	☐	☐	21	1.0
e	Maintain proper balance between theory and experiment or practice.	☐	☐	☐	☐	☐	☐	22	1.0
f	Take advantage of previous work (avoid reinventing the wheel).	☐	☐	☐	☐	☐	☐	23	1.0
g	Meet schedules.	☐	☐	☐	☐	☐	☐	24	1.0
h	Prepare sound budgets.	☐	☐	☐	☐	☐	☐	25	0.7
i	Perform within budget.	☐	☐	☐	☐	☐	☐	26	1.0
j	Plan effectively.	☐	☐	☐	☐	☐	☐	27	0.8
k	Analyze, synthesize and optimize.	☐	☐	☐	☐	☐	☐	28	0.8
l	Conceptualize and innovate.	☐	☐	☐	☐	☐	☐	29	0.8
m	Apply right tools and people.	☐	☐	☐	☐	☐	☐	30	1.0
n	Think broadly and see a variety of viewpoints.	☐	☐	☐	☐	☐	☐	31	0.8
o	Foresee events and problems (foresight).	☐	☐	☐	☐	☐	☐	32	0.7
p	Insight and sensitivity (recognize technical or people problems).	☐	☐	☐	☐	☐	☐	33	0.8
q	Help develop other people.	☐	☐	☐	☐	☐	☐	34	1.0
r	Get along well with people who report to him.	☐	☐	☐	☐	☐	☐	35	0.7
s	Get along well with people on his own level.	☐	☐	☐	☐	☐	☐	36	0.7
t	Get along well with people senior to him.	☐	☐	☐	☐	☐	☐	37	0.7
u	Be adaptable and patient.	☐	☐	☐	☐	☐	☐	38	0.6

(over)

		Extremely high 1	Quite high 2	Average 3	Not very high 4	Poor 5	Not Observed or Not Applicable 6		JUDGMENTAL WEIGHTING FACTORS
v	Work aggressively and diligently.	☐	☐	☐	☐	☐	☐	39	1.0
w	Spends extra hours when required.	☐	☐	☐	☐	☐	☐	40	1.0
x	Exercise leadership.	☐	☐	☐	☐	☐	☐	41	1.0
y	Motivate others.	☐	☐	☐	☐	☐	☐	42	0.8
z	Manage others.	☐	☐	☐	☐	☐	☐	43	1.0
aa	Work up to his full potential.	☐	☐	☐	☐	☐	☐	44	0.7
bb	Respond to new problems and opportunities.	☐	☐	☐	☐	☐	☐	45	0.7
cc	Work conscientiously even on routine problems.	☐	☐	☐	☐	☐	☐	46	0.7
dd	Instigate needed changes.	☐	☐	☐	☐	☐	☐	47	0.5
ee	Take, defend, and maintain a position.	☐	☐	☐	☐	☐	☐	48	0.5
ff	Work within the system.	☐	☐	☐	☐	☐	☐	49	0.5
gg	Accept setbacks and move ahead.	☐	☐	☐	☐	☐	☐	50	0.5
hh	Articulate his ideas and concepts.	☐	☐	☐	☐	☐	☐	51	0.5
ii	Support disagreeable decisions.	☐	☐	☐	☐	☐	☐	52	0.5
jj	Maintain loyalty and dedication to the organization.	☐	☐	☐	☐	☐	☐	53	0.5
kk	Operate with high ethical standards.	☐	☐	☐	☐	☐	☐	54	0.5

3. Specify the year which is basis of this evaluation (i.e., hopefully the end of the first year for which the named individual worked for you). 19 ☐☐ 56

4. Are you also the named individual's current supervisor? YES - 1 NO - 2 ☐ 57

Questionnaire to be completed by current supervisor

5

Organization Code No. ☐☐

Division Code No. D V ☐☐

Department Code No. D P ☐☐☐

Individual's Code No. I ☐☐☐☐ 17

1. The questions in (2) below are designed to provide a measure of "inherent ability." They have nothing to do per se with the Study's measures of continuing education or performance.
2. Below you will find a rating scale opposite a list of personal attributes. Please check the box on each that seems to best fit your evaluation of the individual named on the cover sheet.

	Rate Person's Ability to:	Extremely high 1	Quite high 2	Average 3	Not very high 4	Poor 5	Not Observed or Not Applicable 6		JUDGMENTAL WEIGHTING FACTORS
a	Ask relevant questions.	☐	☐	☐	☐	☐	☐	18	0.8
b	Get job done in best way, at least cost.	☐	☐	☐	☐	☐	☐	19	1.0
c	Clearly define job requirements.	☐	☐	☐	☐	☐	☐	20	0.8
d	Apply current state of the art technical knowledge.	☐	☐	☐	☐	☐	☐	21	1.0
e	Maintain proper balance between theory and experiment or practice.	☐	☐	☐	☐	☐	☐	22	1.0
f	Take advantage of previous work (avoid reinventing the wheel).	☐	☐	☐	☐	☐	☐	23	1.0
g	Meet schedules.	☐	☐	☐	☐	☐	☐	24	1.0
h	Prepare sound budgets.	☐	☐	☐	☐	☐	☐	25	0.7
i	Perform within budget.	☐	☐	☐	☐	☐	☐	26	1.0
j	Plan effectively.	☐	☐	☐	☐	☐	☐	27	0.8
k	Analyze, synthesize and optimize.	☐	☐	☐	☐	☐	☐	28	0.8
l	Conceptualize and innovate.	☐	☐	☐	☐	☐	☐	29	0.8
m	Apply right tools and people.	☐	☐	☐	☐	☐	☐	30	1.0
n	Think broadly and see a variety of viewpoints.	☐	☐	☐	☐	☐	☐	31	0.8
o	Foresee events and problems (foresight).	☐	☐	☐	☐	☐	☐	32	0.7
p	Insight and sensitivity (recognize technical or people problems).	☐	☐	☐	☐	☐	☐	33	0.8
q	Help develop other people.	☐	☐	☐	☐	☐	☐	34	1.0
r	Get along well with people who report to him.	☐	☐	☐	☐	☐	☐	35	0.7
s	Get along well with people on his own level.	☐	☐	☐	☐	☐	☐	36	0.7
t	Get along well with people senior to him.	☐	☐	☐	☐	☐	☐	37	0.7
u	Be adaptable and patient.	☐	☐	☐	☐	☐	☐	38	0.6

(over)

		Extremely high 1	Quite high 2	Average 3	Not very high 4	Poor 5	Not Observed or Not Applicable 6	JUDGMENTAL WEIGHTING FACTORS
v	Work aggressively and diligently.	☐	☐	☐	☐	☐	☐ 39	1.0
w	Spends extra hours when required.	☐	☐	☐	☐	☐	☐ 40	1.0
x	Exercise leadership.	☐	☐	☐	☐	☐	☐ 41	1.0
y	Motivate others.	☐	☐	☐	☐	☐	☐ 42	0.8
z	Manage others.	☐	☐	☐	☐	☐	☐ 43	1.0
aa	Work up to his full potential.	☐	☐	☐	☐	☐	☐ 44	0.7
bb	Respond to new problems and opportunities.	☐	☐	☐	☐	☐	☐ 45	0.7
cc	Work conscientiously even on routine problems.	☐	☐	☐	☐	☐	☐ 46	0.7
dd	Instigate needed changes.	☐	☐	☐	☐	☐	☐ 47	0.5
ee	Take, defend, and maintain a position.	☐	☐	☐	☐	☐	☐ 48	0.5
ff	Work within the system.	☐	☐	☐	☐	☐	☐ 49	0.5
gg	Accept setbacks and move ahead.	☐	☐	☐	☐	☐	☐ 50	0.5
hh	Articulate his ideas and concepts.	☐	☐	☐	☐	☐	☐ 51	0.5
ii	Support disagreeable decisions.	☐	☐	☐	☐	☐	☐ 52	0.5
jj	Maintain loyalty and dedication to the organization.	☐	☐	☐	☐	☐	☐ 53	0.5
kk	Operate with high ethical standards.	☐	☐	☐	☐	☐	☐ 54	0.5

3. Please rate the individual on a scale of 1–5 by checking the appropriate box:

ll Level of *present* management responsibility:

Carries heavy management responsibilities for project or program outcomes and the combined work of others.				Carries a small amount of management responsibilities for total outcomes. Works under close supervision.
1	2	3	4	5
☐	☐	☐	☐	☐ 55

mm Level of *present* technical challenge:

Present assignment is very technically complex and requires a great deal of technical sophistication.				Present assignment is routine and can be performed by someone without a great deal of technical sophistication.
1	2	3	4	5
☐	☐	☐	☐	☐ 56

4. Are you also the evaluated individual's first or earliest supervisor?

YES – 1 NO – 2 ☐ 57

APPENDIX 3A

FMC

```
      I
1.C ***  (       3)
    I   HS ONLY           VALID CASES       97
    I
    I
2.0 **  (       2)
    I   A.A.
    I
    I
3.0 ************************************ (      65)
    I   BACHELORS
    I
    I
4.0 ************** (     24)
    I   MASTERS
    I
    I
5.C ***  (       3)
    I   DOCTORS
```

NASA

```
    .
0.C **  (       1)
    I                        VALID CASES       34
    I
    I
2.C **  (       1)
    I   A.A.
    I
    I
3.C ********************************* (      30)
    I   EACHELORS
    I
    I
4.C ***************************************** (      37)
    I   MASTERS
    I
    I
5.0 ***************** (     15)
    I   DOCTORS
```

FORD

```
    I
1.C ***** (      7)
    I   HS CNLY              VALID CASES      118
    I
    I
2.C ***  (       4)
    I   A.A.
    I
    I
3.C ********************************** (      61)
    I   EACHELORS
    I
    I
4.C ********************** (     39)
    I   MASTERS
    I
    I
5.C ***** (      7)
    I   DOCTORS
```

SYLVANIA

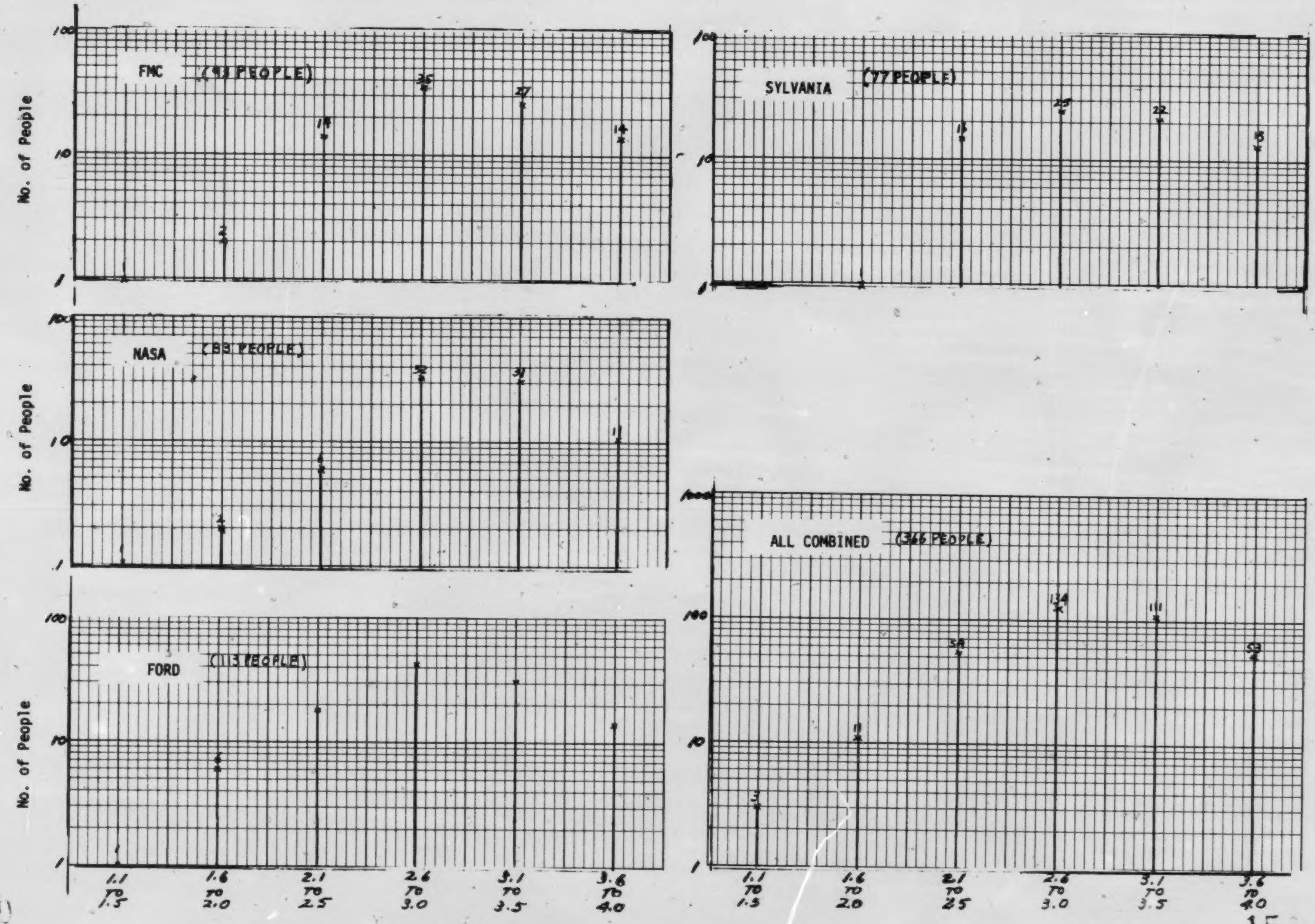
```
    .
1.C **  (       1)
    I   HS ONLY  VALID CASES       80
    I
    I
2.C **  (       1)
    I   A.A.
    I
    I
3.0 ********************** (      39)
    I   BACHELURS
    I
    I
4.0 ******************** (     33)
    I   MASTERS
    I
    I
5.0 **** (      5)
    I   DOCTORS
    .
```

ALL COMBINED

```
CODE
    I                                         VALID CASES      379
0.0 *  (       1)
    I
    I
    I
1.C **** (     11)
    I   HS ONLY
    I
    I
2.C ***  (      8)
    I   A.A.
    I
    I
3.C ***************************************************** (    195)
    I   BACHELOPS
    I
    I
4.0 ************************************ (    133)
    I   MASTERS
    I
    I
5.C ********** (     31)
    I   DOCTORS
    .
```

DEGREE DISTRIBUTION

APPENDIX 3B

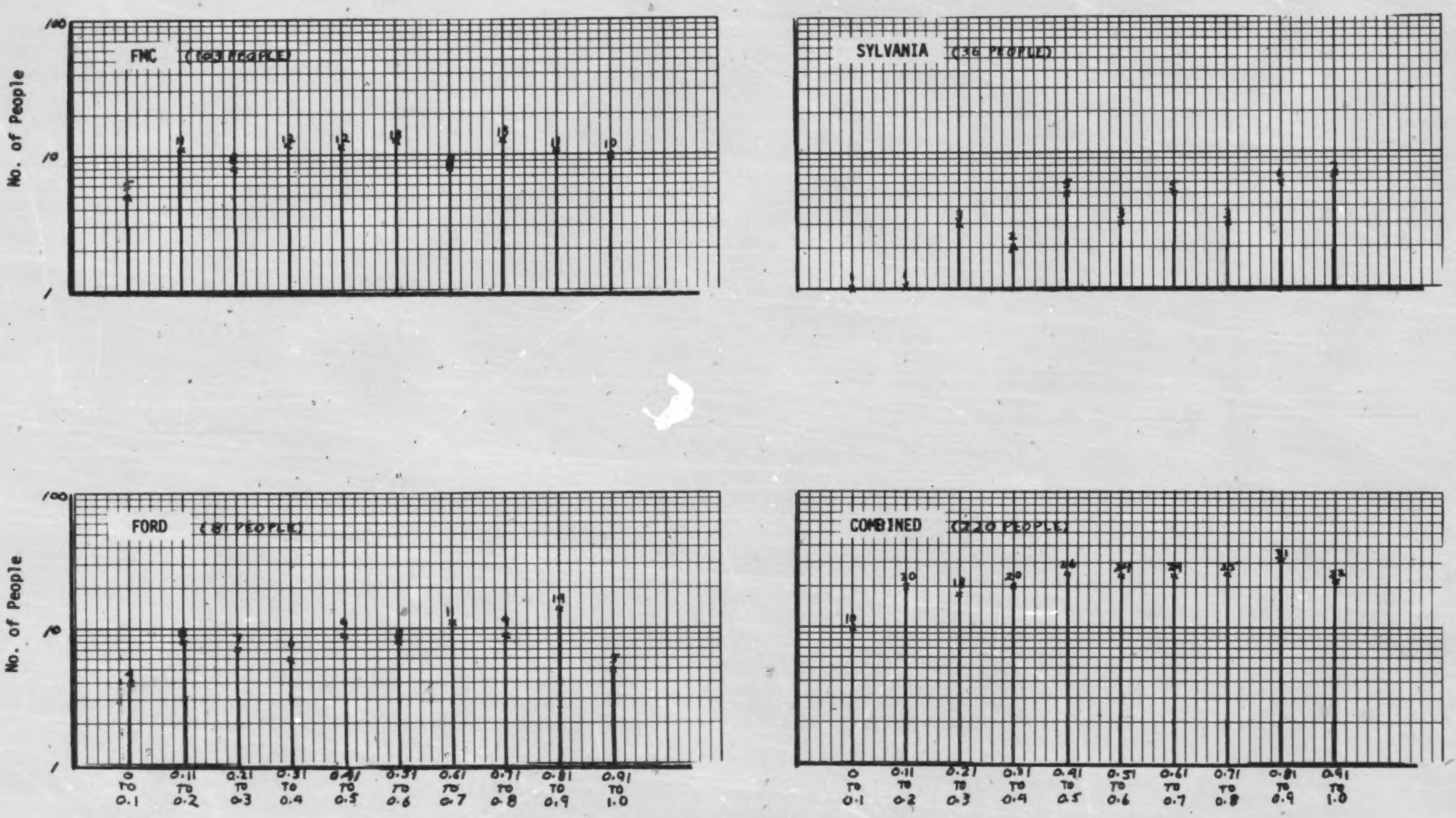


UNDERGRADUATE GRADE POINT AVERAGE (IGPA)
Frequency Distributions

	No. of People				
	FORD	NASA	FMC	SYLVANIA	ALL COMBINED
Honors	44	44	39	32	159
No Honors	128	42	91	113	374
Top Schools	23	28	23	26	100
Lower Schools	86	57	69	53	265
M.S. before TEMPLY	9	17	11	13	50
M.S. after TEMPLY	37	35	16	26	114

HONORS vs. NO HONORS, TOP SCHOOLS vs. LOWER SCHOOLS, M.S. AFTER TEMPLY vs. BEFORE TEMPLY
Frequency Distributions

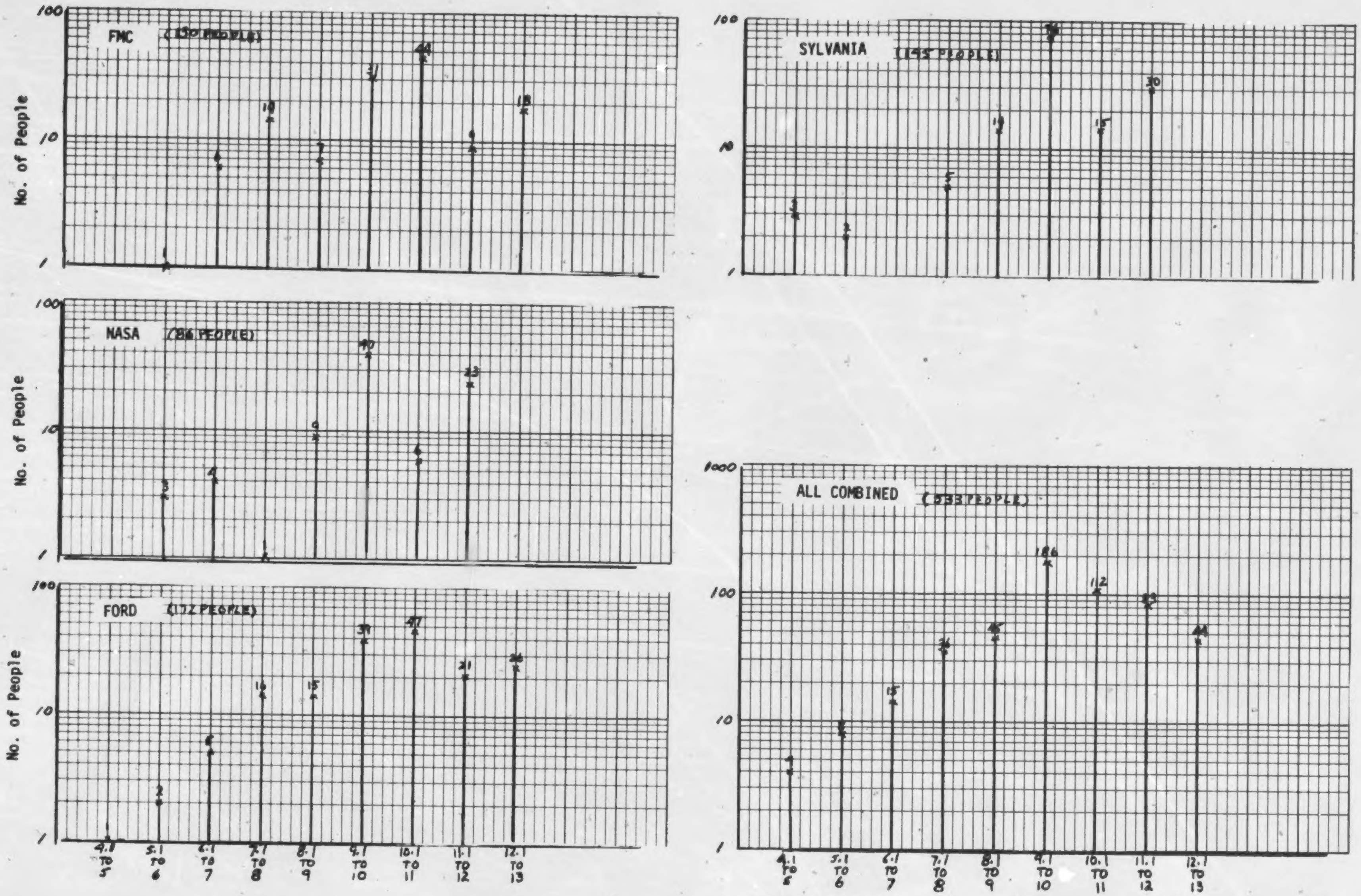
APPENDIX 3C



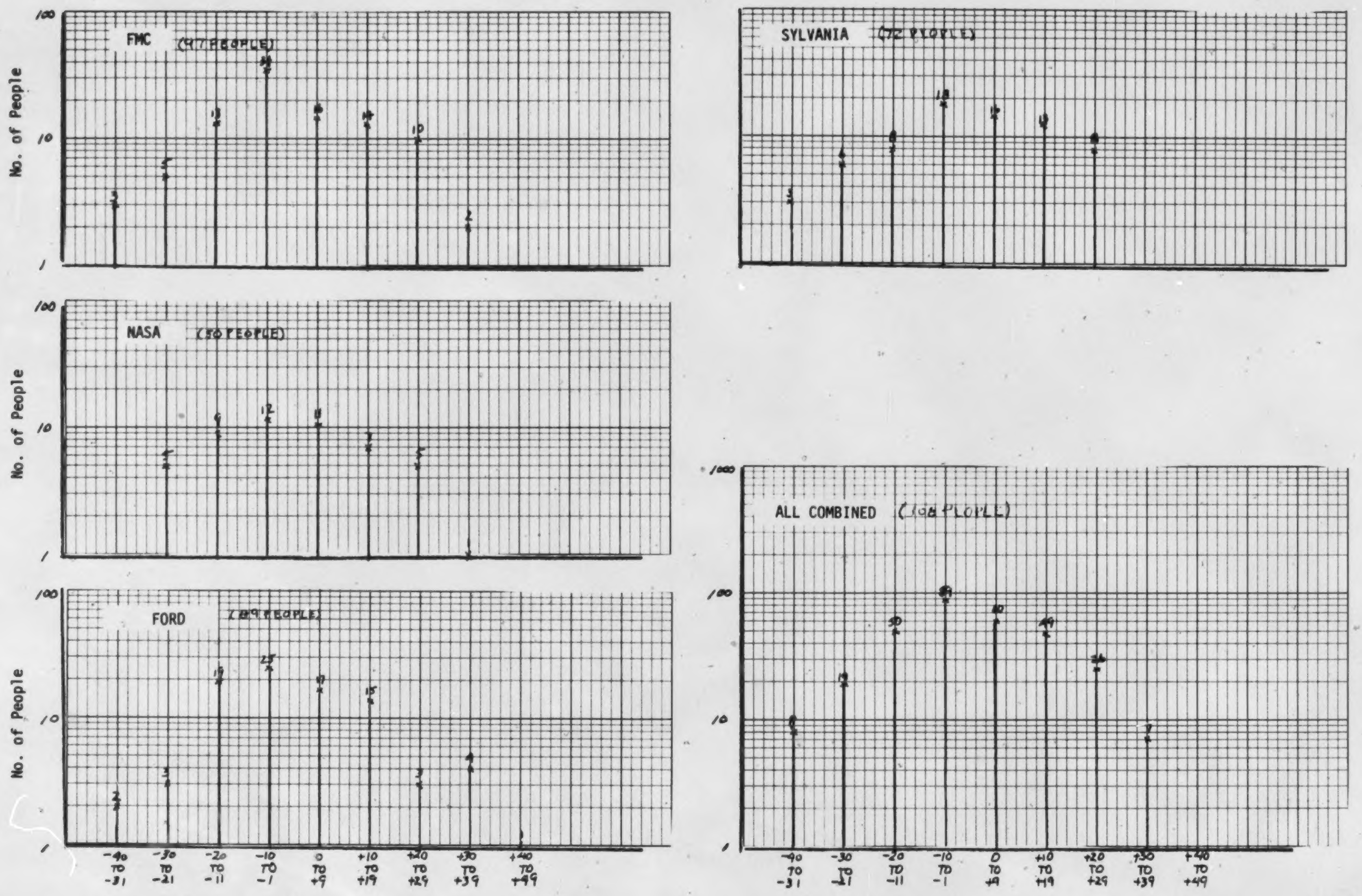
APPENDIX 3D

CHIEF ENGINEER'S RATINGS (OCR)
Frequency Distributions

APPENDIX 3E



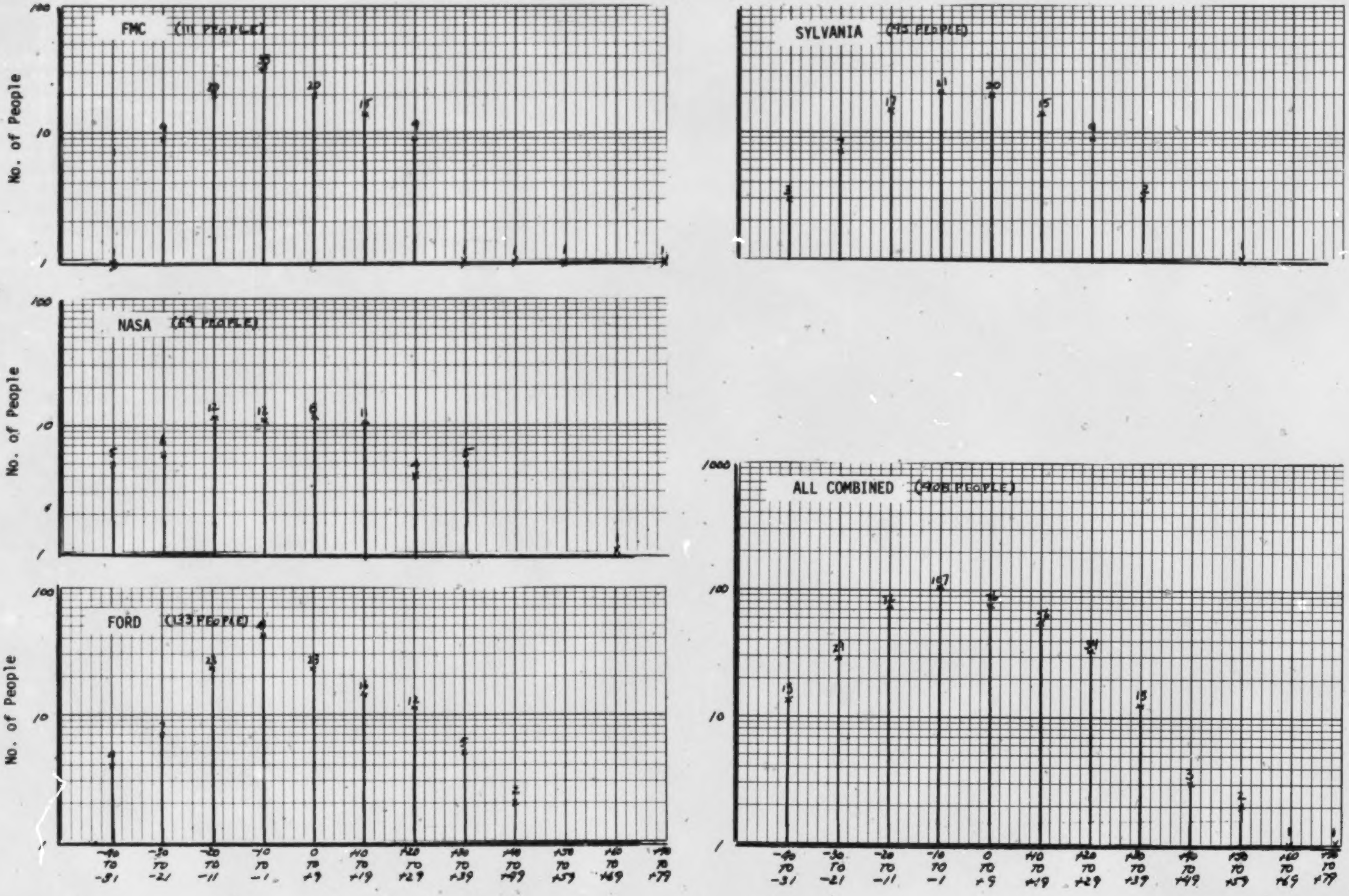
DRIVE - FROM PRESENT SUPERVISOR'S EVALUATIONS
Frequency Distributions



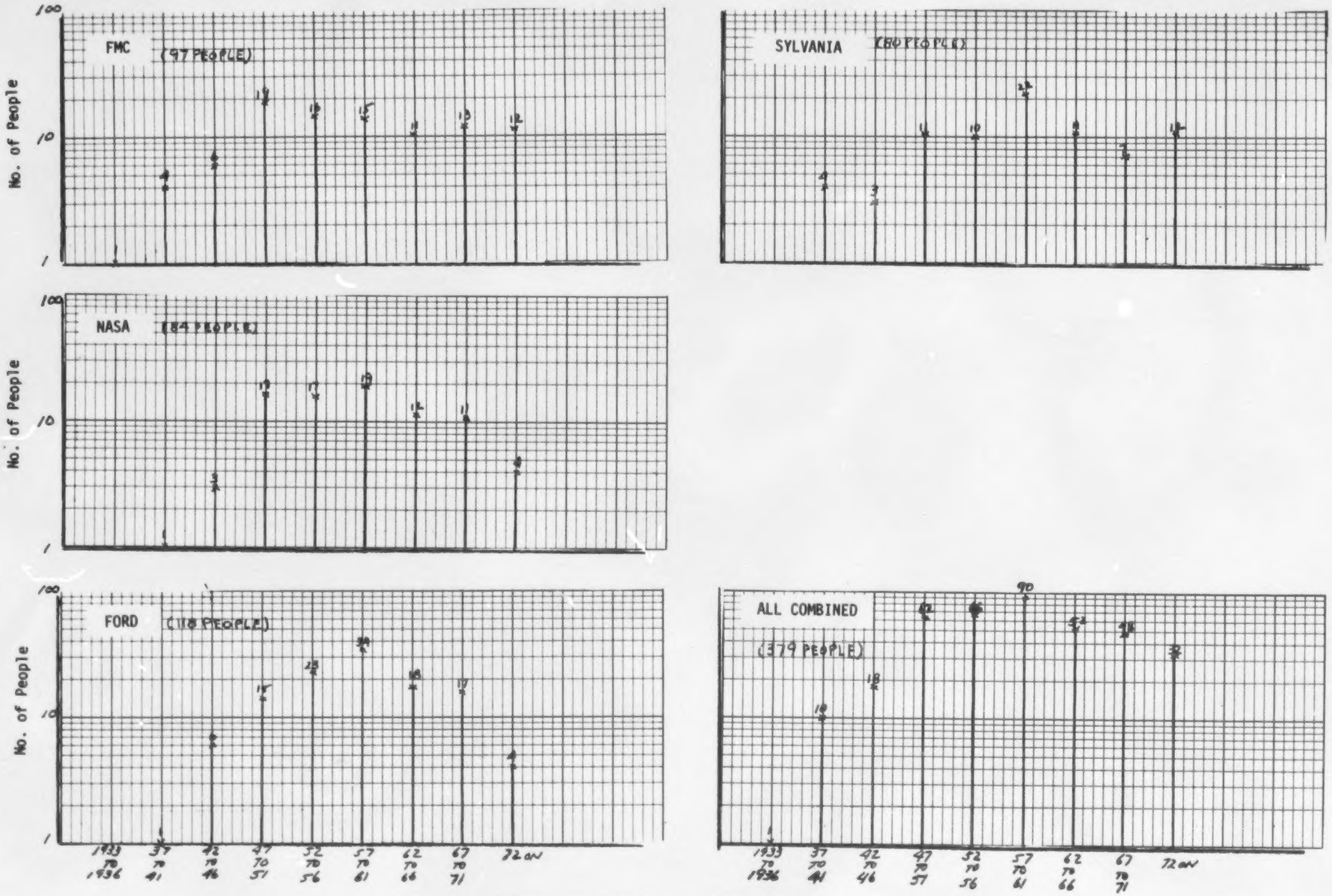
APPENDIX 3F

FIRST SUPERVISOR'S RATINGS (IFR)
Frequency Distributions

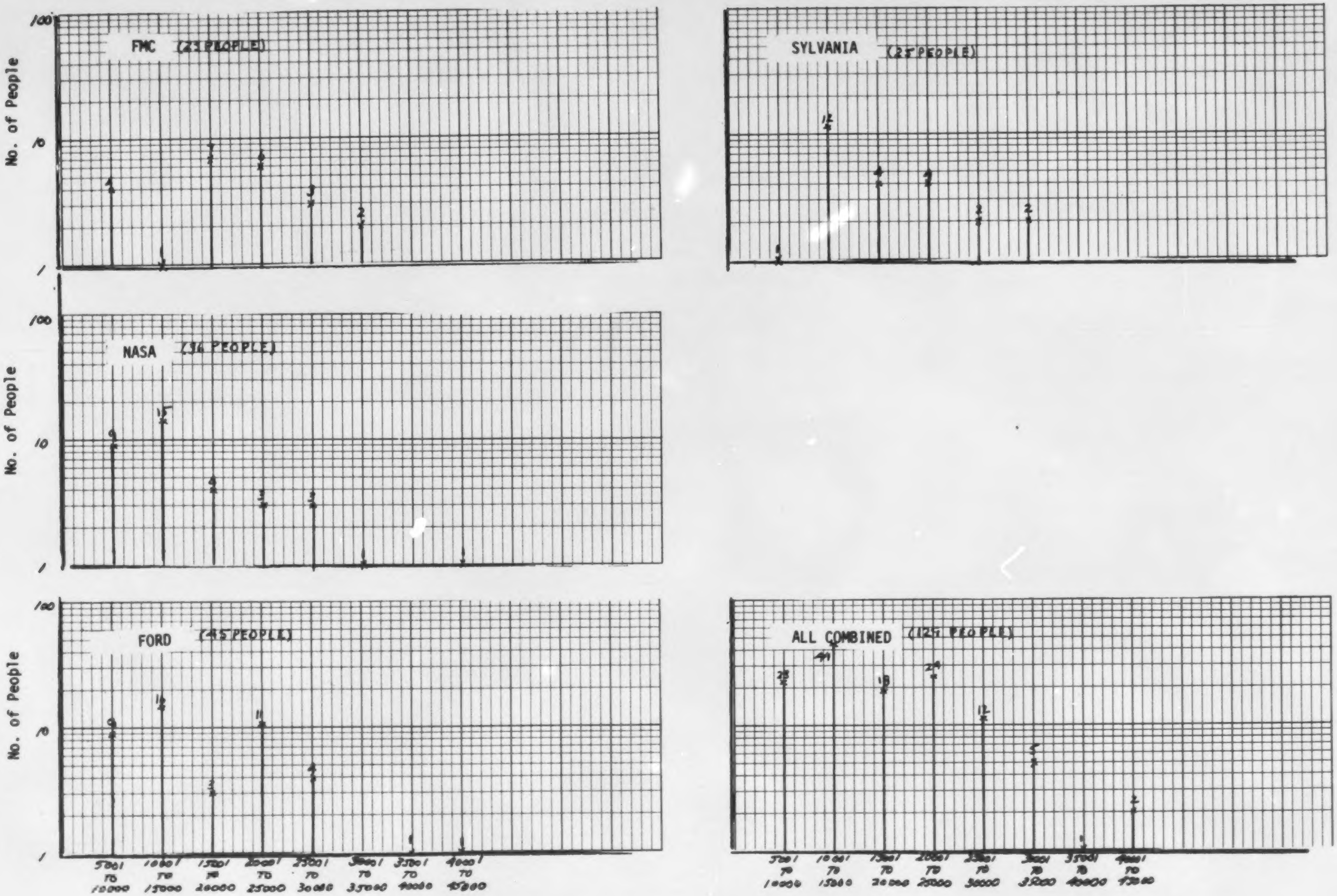
APPENDIX 3G



PRESENT SUPERVISOR'S RATINGS (IPR)
Frequency Distributions



YEAR OF FIRST FULL-TIME EMPLOYMENT (TEMPLY)
Frequency Distribution



ABSOLUTE ADJUSTED COMPENSATION (OAC) IN YEAR 6
Frequency Distributions

FORD
(70 people)

```
                 ADJ CUM                      ADJ CUM                      ADJ CUM
 CODE       FREQ PCT PCT      CODE       FREQ PCT PCT      CODE       FREQ PCT PCT

  0.0         27  39  39       8.0          2   3  81      50.0          1   1  93
  1.0          6   9  47      10.0          1   1  83      70.0          1   1  94
  2.0         10  14  61      12.0          1   1  84      80.0          1   1  96
  3.0          4   6  67      15.0          2   3  87      85.0          1   1  97
  4.0          4   6  73      16.0          1   1  89     105.0          1   1  99
  6.0          1   1  74      35.0          1   1  90     150.0          1   1 100
  7.0          3   4  79      40.0          1   1  91
```

NASA
(47 people)

```
                 ADJ CUM                      ADJ CUM                      ADJ CUM
 CODE       FREQ PCT PCT      CODE       FREQ PCT PCT      CODE       FREQ PCT PCT

  0.0         30  64  64       4.0          2   4  85      10.0          1   2  96
  1.0          3   6  70       5.0          2   4  89      12.0          1   2  98
  2.0          1   2  72       7.0          1   2  91      50.0          1   2 100
  3.0          4   9  81       8.0          1   2  94
```

FMC
(37 people)

```
                 ADJ CUM                      ADJ CUM                      ADJ CUM
 CODE       FREQ PCT PCT      CODE       FREQ PCT PCT      CODE       FREQ PCT PCT

  0.0         14  38  38       4.0          2   5  70      10.0          1   3  92
  1.0          2   5  43       5.0          3   8  78      12.0          1   3  95
  2.0          3   8  51       6.0          3   8  86      20.0          1   3  97
  3.0          5  14  65       9.0          1   3  89     120.0          1   3 100
```

SYLVANIA
(36 people)

```
                 ADJ CUM                      ADJ CUM                      ADJ CUM
 CODE       FREQ PCT PCT      CODE       FREQ PCT PCT      CODE       FREQ PCT PCT

  0.0         18  50  50       4.0          1   3  69      10.0          1   3  86
  1.0          2   6  56       5.0          3   8  78      15.0          2   6  92
  2.0          2   6  61       7.0          1   3  81      20.0          2   6  97
  3.0          2   6  67       8.0          1   3  83      26.0          1   3 100
```

COMBINED
(190 people)

```
                 ADJ CUM                      ADJ CUM                      ADJ CUM
 CODE       FREQ PCT PCT      CODE       FREQ PCT PCT      CODE       FREQ PCT PCT

  0.0         89  47  47       9.0          1   1  86      50.0          2   1  97
  1.0         13   7  54      10.0          4   2  88      70.0          1   1  97
  2.0         16   8  62      12.0          3   2  90      80.0          1   1  98
  3.0         15   8  70      15.0          4   2  92      85.0          1   1  98
  4.0          9   5  75      16.0          1   1  93     105.0          1   1  99
  5.0          8   4  79      20.0          3   2  94     120.0          1   1  99
  6.0          4   2  81      26.0          1   1  95     150.0          1   1 100
  7.0          5   3  84      35.0          1   1  95
  8.0          4   2  86      40.0          1   1  96
```

NUMBER OF PERSONS SUPERVISED (OSP) IN YEAR 6
Frequency Distributions

	NO. OF PEOPLE																			
	CETECH					CEBUS					CEOTH					CETOT				
HOURS	FORD	NASA	FMC	SYL.	ALL	FORD	NASA	FMC	SYL.	ALL	FORD	NASA	FMC	SYL.	ALL	FORD	NASA	FMC	SYL.	ALL
0	111	41	94	107	353	151	75	118	138	482	151	84	117	141	493	100	37	92	103	332
1 - 100	38	14	26	20	98	19	9	11	6	45	18	2	12	4	36	43	17	20	23	103
101 - 200	9	6	5	9	29	2	2	0	1	5	3	0	0	0	3	12	6	11	9	38
201 - 300	7	5	1	3	16	0	0	0	0	0	0	0	0	0	0	9	5	1	4	19
301 - 400	2	7	0	4	13	0	0	1	0	1	0	0	0	0	0	1	8	0	4	13
401 - 500	3	2	2	0	7	0	0	0	0	0	0	0	1	0	1	4	2	3	0	9
501 - 600	1	3	1	1	6	0	0	0	0	0	0	0	0	0	0	2	3	1	1	7
601 - 700	1	3	1	0	5	0	0	0	0	0	0	0	0	0	0	1	3	2	0	6
701 - 800	0	5	0	0	5	0	0	0	0	0	0	0	0	0	0	0	4	0	0	4
801 - 900	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
901 - 1,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1,001 - 1,100	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
	172	86	130	145	533	172	86	130	145	533	172	86	130	145	533	172	86	130	145	533

ACCUMULATED CONTINUING EDUCATION HOURS IN YEAR 6

Frequency Distributions

APPENDIX 3K

	TOTAL CE HOURS																								
	Year 3				Year 6				Year 9				Year 12				Year 15				Year 18				Total Hours
FORD:		*	**	***		*	**	***		*	**	***		*	**	***		*	**	***		*	**	***	
CETECH	4,345	40	109	1	7,507	61	123	1	9,888	69	143	1	12,700	82	155	1	14,420	88	164	1	15,382	91	169	1	64,242
CEBUS	548	8	68	0.62	1,255	21	60	0.49	2,107	31	68	0.48	2,630	38	69	0.45	3,963	56	71	0.43	4,743	61	78	0.48	15,246
CEOTH	129	9	14	0.13	843	21	40	0.33	1,097	22	50	0.35	1,331	24	55	0.35	1,707	28	61	0.37	1,989	33	60	0.36	7,096
Total	5,022				9,605				13,092				16,661				20,090				22,114				86,584
NASA:																									
CETECH	5,486	35	157	1	13,596	45	302	1	18,423	55	335	1	22,608	64	353	1	24,803	66	376	1	25,655	66	389	1	110,571
CEBUS	218	4	55	0.35	548	11	50	0.17	836	14	60	0.18	1,589	22	72	0.20	2,461	26	95	0.25	3,705	35	106	0.27	9,357
CEOTH	18	2	9	0.06	18	2	9	0.03	200	8	25	0.07	399	11	36	0.09	519	12	43	0.11	684	17	40	0.1	1,838
Total	5,722				14,162				19,459				24,596				27,783				30,044				121,766
FMC:																									
CETECH	2,427	27	90	1	4,465	36	124	1	5,273	41	129	1	6,121	52	118	1	7,291	64	114	1	8,418	66	127	1	33,995
CEBUS	340	7	48	0.53	781	12	65	0.52	1,526	21	73	0.57	2,410	27	89	0.75	3,057	35	87	0.76	4,036	44	92	0.72	12,150
CEOTH	414	7	59	0.66	774	13	59	0.48	1,038	14	74	0.57	1,146	18	64	0.54	1,480	21	70	0.61	1,624	25	65	0.51	6,476
Total	3,181				6,020				7,837				9,677				11,828				14,078				52,621
SYLVANIA:																									
CETECH	2,243	25	90	1	5,555	38	146	1	8,467	44	192	1	10,084	49	206	1	11,558	58	199	1	12,829	63	204	1	50,736
CEBUS	198	3	66	0.73	265	7	38	0.26	664	16	41	0.21	1,832	26	70	0.34	2,386	30	79	0.40	3,447	39	88	0.43	8,792
CEOTH	62	4	15	0.17	82	4	20	0.14	137	5	27	0.14	377	7	54	0.26	713	11	65	0.33	1,133	14	81	0.40	2,504
Total	2,503				5,902				9,268				12,293				14,657				17,409				62,032
TOTAL FOR ALL FOUR:																									
CETECH	14,501	127	114	1	31,123	180	173	1	42,051	209	201	1	51,513	248	208	1	58,072	248	234	1	62,284	285	218	1	259,544
CEBUS	1,304	21	62	0.54	2,849	51	56	0.32	5,133	83	62	0.31	8,461	113	75	0.36	11,867	177	67	0.29	15,931	179	89	0.41	45,545
CEOTH	623	22	28	0.25	1,717	40	43	0.25	2,472	49	50	0.25	3,253	60	54	0.26	4,419	74	60	0.26	5,430	89	61	0.28	17,914
Total	16,428				35,689				49,656				63,227				74,358				83,645				323,003

* Number of Individuals Participating in CE.

** Average Hours per Individual Reporting Participation in Sample

*** Ratio CETECH/CEBUS/CEOTH Average Hours with CETECH = 1 (comparison within each organization)

TOTAL CE HOURS BROKEN DOWN BY TYPE OF CE

Frequency Distributions

APPENDIX 3L

COMPARISON OF AVERAGE CE HOURS PER INDIVIDUAL PER YEAR - BY TYPE OF CE

(Normalized with NASA hours always equal to 1)

	Year 3			Year 6			Year 9			Year 12			Year 15			Year 18		
	CETECH	CEBUS	CEOTH	CETECH	CEBUS	CEOTH	CETECH	CEBUS	CEOTH	CETECH	CEBUS	CEOTH	CETECH	CEBUS	CEOTH	CETECH	CEBUS	CEOTH
NASA	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
FORD	0.69	1.24	1.56	0.41	1.2	4.44	0.43	0.96	2.0	0.44	0.96	1.53	0.44	0.75	1.42	0.43	0.74	1.5
FMC	0.57	0.87	6.56	0.41	1.3	6.56	0.39	1.24	3.0	0.33	1.24	1.78	0.3	0.92	1.63	0.33	0.87	1.6
SYLVANIA	0.57	1.2	1.67	0.48	0.76	2.22	0.57	0.97	1.1	0.58	0.97	1.5	0.53	0.83	1.51	0.52	0.83	1.5

RATIOS OF TOTAL CETECH HOURS

(Normalized with NASA hours always equal to 1)

	Year 3	Year 6	Year 9	Year 12	Year 15	Year 18
	CETECH	CETECH	CETECH	CETECH	CETECH	CETECH
NASA	1	1	1	1	1	1
FORD	0.79	0.55	0.54	0.56	0.58	0.6
FMC	0.56	0.33	0.29	0.27	0.29	0.33
SYLVANIA	0.52	0.41	0.46	0.45	0.47	0.5

		TOTAL CE HOURS												
No. of People		Year 3	*	Year 6	*	Year 9	*	Year 12	*	Year 15	*	Year 18	*	Total
FORD:														
47	Masters	2,559	150	4,742	176	6,137	198	7,320	222	8,851	233	9,683	248	39,292
125	No Masters	2,463	79	4,893	109	6,955	139	9,341	158	11,255	176	12,495	189	47,402
7	Doctorate	299	100	623	208	625	208	679	226	720	180	738	184	3,684
179	Total	5,321		10,258		13,717		17,340		20,826		22,916		90,378
34	Low GPA	160	10	3,054	122	4,065	150	5,127	177	6,108	197	6,286	196	24,800
42	Mid GPA	2,171	128	3,531	153	4,399	176	5,349	184	6,330	192	7,256	213	29,036
36	High GPA	1,533	118	2,658	140	4,034	168	5,349	191	6,394	206	7,132	223	27,100
112	Total	3,864		9,243		12,498		15,825		18,832		20,674		80,936
86	Low Schools	3,509	100	7,027	132	9,564	159	12,499	181	14,750	191	16,341	212	63,690
23	Top Schools	1,348	122	2,271	162	2,865	191	3,223	215	3,821	225	4,324	227	17,852
109	Total	4,857		9,298		12,429		15,722		18,571		20,665		81,542
NASA:														
52	Masters	5,909	204	12,695	343	17,081	438	21,694	461	24,312	496	25,706	525	107,397
34	No Masters	373	53	1,467	122	2,378	132	2,902	145	3,473	165	4,328	188	14,921
15	Doctorate	1,569	174	3,119	260	4,413	339	5,499	367	6,390	426	7,171	478	28,161
101	Total	7,851		17,281		23,872		30,095		34,175		37,205		150,479
25	Low GPA	1,678	210	4,264	388	5,755	411	6,271	392	6,904	406	7,515	442	32,387
25	Mid GPA	1,184	148	2,468	206	3,304	206	4,784	239	5,638	282	6,530	297	23,908
33	High GPA	3,420	171	7,430	286	10,331	383	13,105	437	15,099	472	15,845	495	65,230
83	Total	6,282		14,162		19,390		24,160		27,641		29,890		121,525
57	Low Schools	4,592	164	10,019	278	13,340	310	16,859	344	18,896	378	19,892	349	83,598
28	Top Schools	1,690	211	4,143	319	5,984	399	7,737	430	8,888	444	10,142	483	38,584
85	Total	6,282		14,162		19,324		24,596		27,784		30,034		122,182
FMC:														
27	Masters	836	84	1,760	147	2,518	180	3,186	212	3,884	194	4,751	226	16,935
103	No Masters	2,345	123	4,262	164	5,309	166	6,491	158	7,944	169	9,327	186	35,678
3	Doctorate	---	---	---	---	---	---	---	---	20	20	50	50	70
133	Total	3,181		6,022		7,827		9,677		11,848		14,128		52,683
32	Low GPA	1,300	130	2,631	188	3,206	178	3,719	169	4,336	181	4,986	208	20,178
32	Mid GPA	1,179	91	2,020	155	2,814	176	3,604	200	4,188	182	4,700	196	18,505
29	High GPA	702	117	1,348	150	1,778	178	2,222	171	2,920	172	3,928	196	12,898
93	Total	3,181		5,999		7,798		9,545		11,444		13,614		51,581
69	Low Schools	3,053	127	5,630	194	7,266	214	8,567	220	9,734	216	10,960	224	45,210
23	Top Schools	128	26	375	47	537	54	793	57	1,489	78	2,367	124	5,689
92	Total	3,181		6,005		7,803		9,360		11,223		13,327		50,899
SYLVANIA:														
39	Masters	1,748	134	4,138	197	6,191	238	7,969	257	9,012	257	10,482	283	39,540
106	No Masters	755	50	1,764	84	2,898	132	4,324	166	5,645	195	7,275	235	22,661
6	Doctorate	760	760	1,590	795	1,662	554	1,782	594	2,232	446	2,565	513	10,591
151	Total	3,263		7,492		10,751		14,075		16,889		20,322		72,792
31	Low GPA	1,502	100	3,350	152	5,493	250	6,688	279	7,372	295	8,198	293	32,603
22	Mid GPA	520	104	1,380	153	2,195	183	3,499	233	4,073	239	4,661	274	16,328
24	High GPA	471	59	1,172	106	1,580	113	2,105	117	2,987	142	4,246	202	12,561
77	Total	2,493		5,902		9,268		12,292		14,432		17,105		61,492
53	Low Schools	1,850	116	4,153	154	6,195	193	8,025	211	9,247	231	10,985	250	40,455
26	Top Schools	653	54	1,729	115	3,073	192	4,196	221	5,156	224	6,216	270	21,023
79	Total	2,503		5,882		9,268		12,221		14,403		17,201		61,478
TOTAL FOR ALL FOUR:														
165	Masters	11,052	160	23,335	240	31,927	290	40,169	319	46,059	324	50,622	347	203,164
368	No Masters	5,936	82	12,386	119	17,540	144	23,058	158	28,317	176	33,425	197	120,662
31	Doctorate	2,628	202	5,332	314	6,700	353	7,960	379	9,362	374	10,524	421	42,506
564	Total	19,616		41,053		56,167		71,187		83,738		94,571		366,332
122	Low GPA	4,640	95	13,299	185	18,519	229	21,805	240	24,720	221	26,985	267	109,968
121	Mid GPA	5,054	117	9,399	165	12,712	184	17,236	210	20,229	217	23,147	239	87,777
122	High GPA	6,126	130	12,608	194	17,723	236	22,781	256	27,400	271	31,151	297	117,789
365	Total	15,820		35,306		48,954		61,822		72,349		81,283		315,534
265	Low Schools	13,004	126	26,829	185	36,365	215	45,950	236	52,627	248	58,178	256	232,953
100	Top Schools	3,819	106	8,518	170	12,459	222	15,949	242	19,354	245	23,049	281	83,148
365	Total	16,823		35,347		48,824		61,899		71,981		81,227		316,101

* Average hours per individual reporting participation in sample.

TOTAL CE HOURS BROKEN DOWN BY ACADEMIC CATEGORIES
Frequency Distributions

APPENDIX 3N

	TOTAL HOURS																	
	*	Year 3	**	*	Year 6	**	*	Year 9	**	*	Year 12	**	*	Year 15	**	*	Year 18	**
FORD																		
CETECH																		
-Not at employer's	(39)	4,130	106	(59)	7,271	123	(68)	9,662	142	(82)	12,483	152	(87)	14,305	164	(91)	15,232	167
-At employer's	(6)	215	36	(5)	266	53	(5)	226	45	(6)	216	36	(4)	119	30	(4)	136	34
-Non-academic instruction	(36)	3,500	97	(55)	6,726	122	(68)	9,604	141	(80)	12,162	152	(86)	14,099	164	(91)	15,098	166
-Academic instruction	(20)	845	42	(20)	811	41	(13)	284	22	(14)	538	38	(10)	327	33	(5)	284	57
-Non-credit	(37)	3,592	97	(57)	6,818	120	(68)	9,524	140	(81)	12,091	149	(87)	13,595	156	(91)	15,126	166
-Credit	(17)	753	44	(18)	719	40	(14)	364	26	(13)	601	47	(10)	361	36	(5)	256	51
NASA																		
CETECH																		
-Not at employer's	(34)	5,836	172	(45)	13,363	297	(55)	18,383	334	(63)	22,542	358	(66)	24,736	375	(66)	25,629	388
-At employer's	(4)	210	53	(5)	233	47	(1)	40	40	(3)	66	22	(2)	69	34	(1)	16	16
-Non-academic instruction	(30)	3,567	119	(43)	11,559	269	(54)	17,339	321	(61)	21,513	353	(65)	24,423	376	(66)	25,514	387
-Academic instruction	(25)	2,479	99	(28)	2,037	73	(17)	1,084	64	(14)	1,094	78	(6)	382	64	(3)	130	43
-Non-credit	(31)	3,947	127	(44)	11,947	272	(55)	17,006	310	(61)	21,637	355	(66)	24,580	372	(66)	25,514	387
-Credit	(20)	2,099	105	(24)	1,649	69	(12)	774	64	(12)	1,049	87	(2)	225	113	(3)	130	43
FMC																		
CETECH																		
-Not at employer's	(26)	2,419	93	(33)	4,276	130	(40)	5,089	127	(49)	5,909	121	(63)	7,211	114	(65)	8,236	127
-At employer's	(1)	8	8	(6)	189	31	(4)	184	46	(6)	120	20	(3)	80	27	(5)	182	36
-Non-academic instruction	(23)	1,607	70	(36)	4,171	116	(39)	5,052	130	(51)	5,871	115	(62)	7,101	115	(66)	8,340	126
-Academic instruction	(11)	820	75	(6)	294	49	(6)	221	37	(4)	250	63	(4)	190	48	(2)	78	39
-Non-credit	(24)	1,688	70	(35)	4,161	119	(39)	5,089	130	(52)	5,893	115	(64)	7,275	114	(66)	8,324	126
-Credit	(9)	759	84	(7)	304	43	(5)	135	27	(3)	138	46	(1)	16	16	(2)	94	47
SYLVANIA																		
CETECH																		
-Not at employer's	(25)	2,223	89	(38)	5,435	143	(43)	8,340	194	(46)	9,934	216	(56)	11,268	201	(63)	12,731	202
-At employer's	(1)	20	20	(3)	120	40	(2)	128	64	(2)	120	60	(5)	290	58	(4)	98	24
-Non-academic	(21)	1,829	87	(38)	4,599	121	(43)	7,725	180	(48)	9,833	205	(58)	11,162	192	(62)	12,490	201
-Academic	(7)	414	59	(10)	956	96	(12)	742	62	(5)	251	50	(7)	396	57	(10)	339	34
-Non-credit	(21)	1,829	87	(38)	4,603	121	(44)	7,844	178	(48)	9,972	208	(58)	11,424	197	(62)	12,600	203
-Credit	(7)	414	59	(9)	952	106	(11)	623	57	(4)	112	28	(3)	134	45	(5)	229	46
ALL COMBINED																		
CETECH																		
-Not at employer's	(124)	14,608	118	(175)	30,219	173	(206)	41,473	201	(243)	50,391	207	(272)	58,122	214	(285)	61,842	217
-At employer's	(12)	453	38	(19)	808	43	(12)	578	48	(17)	522	31	(14)	558	40	(14)	432	31
-Non-academic	(110)	10,503	95	(172)	27,045	157	(204)	39,720	195	(240)	49,260	205	(271)	56,785	209	(285)	61,446	216
-Academic	(63)	4,558	72	(64)	4,098	64	(48)	2,331	49	(37)	2,133	58	(27)	1,295	48	(20)	831	42
-Non-credit	(113)	11,036	98	(174)	27,529	158	(206)	40,155	195	(242)	49,105	203	(275)	57,109	208	(285)	61,378	215
-Credit	(53)	4,025	76	(58)	3,624	62	(42)	1,892	45	(32)	1,908	60	(16)	736	46	(15)	689	46

*Number of People Reporting.
**Average Hours Per People Reporting

TOTAL CE HOURS BROKEN DOWN BY LOCATION, TYPE OF INSTRUCTION AND CREDIT vs. NON-CREDIT
Frequency Distributions

APPENDIX 3 0

MASTERS BEFORE TEMPLY	3 Years			6 Years			9 Years			12 Years			15 Years			18 Years		
	Hrs.	*	**	Hrs.	*	**	Hrs.	*	**	Hrs.	*	**	Hrs.	*	**	Hrs.	*	**
FORD																		
CETECH	64	2	32	156	2	78	196	3	65	236	3	79	236	3	79	296	3	99
CEBUS	270	1	270	480	1	480	610	2	305	610	2	305	670	3	223	670	3	223
TOTAL	334			636			806			846			906			966		
NASA																		
CETECH	1,658	10	166	2,946	11	268	3,753	11	341	4,831	14	345	5,151	14	368	5,261	14	376
CEBUS	84	2	42	178	5	36	271	5	54	311	6	52	391	6	65	391	6	65
TOTAL	1,742			3,124			4,024			5,142			5,542			5,652		
FMC																		
CETECH	73	4	18	177	4	44	201	4	50	241	6	40	380	9	42	434	9	48
CEBUS	24	1	24	79	3	26	79	3	26	79	3	26	222	4	55	585	6	97
TOTAL	97			256			280			320			602			1,019		
SYLVANIA																		
CETECH	522	6	87	937	8	117	1,110	10	111	1,605	10	160	1,923	11	175	2,013	11	183
CEBUS	12	2	6	76	5	15	100	6	17	116	7	17	149	7	21	441	9	49
TOTAL	534			1,013			1,210			1,721			2,072			2,454		
TOTAL																		
CETECH	2,317	22	105	4,216	25	169	5,260	28	188	6,913	33	209	7,690	37	208	8,004	37	216
CEBUS	390	6	65	813	14	58	1,060	16	66	1,116	18	62	1,432	20	72	2,087	24	87
TOTAL	2,707			5,029			6,320			8,029			9,122			10,091		

MASTERS AFTER TEMPLY	3 Years			6 Years			9 Years			12 Years			15 Years			18 Years		
	Hrs.	*	**	Hrs.	*	**	Hrs.	*	**	Hrs.	*	**	Hrs.	*	**	Hrs.	*	**
FORD																		
CETECH	2,149	12	179	3,553	21	169	4,224	24	176	5,064	27	188	5,742	30	191	6,106	31	197
CEBUS	74	1	74	160	6	27	480	11	44	624	14	45	1,218	19	64	1,423	20	71
TOTAL	2,223			3,713			4,704			5,688			6,960			7,529		
NASA																		
CETECH	4,015	18	223	9,239	23	402	12,348	27	457	15,027	31	485	16,660	33	505	17,132	33	519
CEBUS	134	2	67	314	4	78	509	7	73	1,126	13	87	1,591	13	122	2,238	17	132
TOTAL	4,149			9,553			12,857			16,153			18,251			19,370		
FMC																		
CETECH	681	5	136	1,414	7	202	1,820	9	202	2,094	9	233	2,420	11	220	2,632	11	239
CEBUS	4	1	4	12	1	12	340	3	113	682	4	170	772	5	154	916	6	153
TOTAL	685			1,426			2,160			2,776			3,192			3,548		
SYLVANIA																		
CETECH	1,206	6	201	3,117	11	283	4,712	14	337	5,207	16	325	5,[illegible]	19	298	6,222	21	296
CEBUS	---	--	---	---	--	---	261	5	52	913	11	83	1,067	11	97	1,573	14	112
TOTAL	1,206			3,117			4,973			6,120			6,731			7,795		
TOTAL																		
CETECH	8,051	41	196	17,323	62	279	23,104	74	312	27,392	83	330	30,486	93	328	32,092	96	334
CEBUS	212	4	53	486	11	44	1,590	26	61	3,345	42	80	4,648	48	97	6,150	57	108
TOTAL	8,263			17,809			24,694			30,737			35,134			38,242		

*Number of people who participated in CE
**Average Hours

CETECH AND CEBUS MS BEFORE TEMPLY vs. MS AFTER TEMPLY

Frequency Distribution

APPENDIX 3P

APPENDIX 3Q

	TOTAL ENGINEER POPULATION	NUMBER OF VOLUNTEERS	NUMBER OF ACTUAL ENGR. PARTICIPANTS	PERCENT ACTUAL PARTICIPATION	FORMS RECIEVED FROM				COMPLETE DATA RECEIVED	PERCENT OF PARTICIPANTS ON WHOM COMPLETE DATA WAS RECEIVED		
					Pers.	Chf. Engr.	1st Sup.	Cur. Sup.		IN ALL CATEGORIES	FROM CHIEF ENGR. (OCR)	FROM CURR. SUPR. (IPR/DRIVE)
NASA	532	123	85	16	123	0	76	96	68	80	0	84 (70/85)
FORD	1,050	168	126	12	165	97	108	138	44	35	60 (75/126)	86 (108/126)
FMC	350	139	102	29	118	106	100	112	69	68	85 (87/102)	89 (91/102)
SYLVANIA	800	123	83	10	140	86	73	96	30	36	59 (49/83)	81 (67/83)
ALL COMBINED	2,732	553	396	14	546	289	357	442	211	53	68	85

RESPONSE STATISTICS FOR ENGINEERING POPULATION

APPENDIX 4A

```
             IGPA      ISCH      ISH       IFR       IPR       DRIVECUR OCR

IGPA        1.0000   -0.0034    0.4679    0.0802    0.1285    0.0797    0.1305
           (  365)   (  357)   (  365)   (  210)   (  292)   (  292)   (  146)
           S=0.001   S=0.475   S=0.001   S=0.124   S=0.014   S=0.087   S=0.058

ISCH       -0.0034    1.0000   -0.0652   -0.1366   -0.0375    0.0174    0.1427
           (  357)   (  365)   (  365)   (  211)   (  293)   (  293)   (  146)
           S=0.475   S=0.001   S=0.107   S=0.024   S=0.261   S=0.383   S=0.043

ISH         0.4679   -0.0652    1.0000    0.0378    0.0405    0.0058    0.1228
           (  365)   (  365)   (  533)   (  308)   (  408)   (  408)   (  220)
           S=0.001   S=0.107   S=0.001   S=0.254   S=0.207   S=0.454   S=0.035

IFR         0.0802   -0.1366    0.0378    1.0000    0.3396    0.2415    0.3385
           (  210)   (  211)   (  308)   (  308)   (  249)   (  249)   (  133)
           S=0.124   S=0.024   S=0.254   S=0.001   S=0.001   S=0.001   S=0.001

IPR         0.1285   -0.0375    0.0405    0.3396    1.0000    0.6739    0.4961
           (  292)   (  293)   (  408)   (  249)   (  408)   (  408)   (  179)
           S=0.014   S=0.261   S=0.207   S=0.001   S=0.001   S=0.001   S=0.001

DRIVECUR    0.0797    0.0174    0.0058    0.2415    0.6739    1.0000    0.3392
           (  292)   (  293)   (  408)   (  249)   (  408)   (  408)   (  179)
           S=0.087   S=0.383   S=0.454   S=0.001   S=0.001   S=0.001   S=0.001
```

```
 OAC03     OAC06     OAC09     OAC12     OAC15     OAC18

 0.1043    0.1152   -0.0673    0.1275    0.1007    0.0276
(   88)   (  123)   (  135)   (  145)   (  151)   (  125)
S=0.167   S=0.102   S=0.219   S=0.053   S=0.109   S=0.380

 0.0360   -0.0588    0.1083    0.1546    0.0[illegible]3    0.0244
(   88)   (  125)   (  136)   (  148)   ( [illegible])   (  126)
S=0.370   S=0.257   S=0.105   S=0.030   S=0.[illegible]78   S=0.393

 0.1008    0.1784    0.1120    0.1735    0.1807    0.1100
(   90)   (  129)   (  145)   (  160)   (  158)   (  134)
S=0.172   S=0.022   S=0.090   S=0.014   S=0.012   S=0.103

 0.1746    0.1663   -0.0092   -0.0885   -0.0727   -0.1541
(   60)   (   83)   (  102)   (  107)   (   96)   (   77)
S=0.091   S=0.066   S=0.464   S=0.182   S=0.241   S=0.090

 0.0536    0.1440    0.1715    0.1218    0.0745    0.1822
(   81)   (  111)   (  118)   (  131)   (  133)   (  116)
S=0.317   S=0.066   S=0.032   S=0.083   S=0.197   S=0.025

 0.1602    0.2021    0.1919    0.0828   -0.0175    0.1314
(   81)   (  111)   (  118)   (  131)   (  133)   (  116)
S=0.077   S=0.017   S=0.019   S=0.174   S=0.421   S=0.080
```

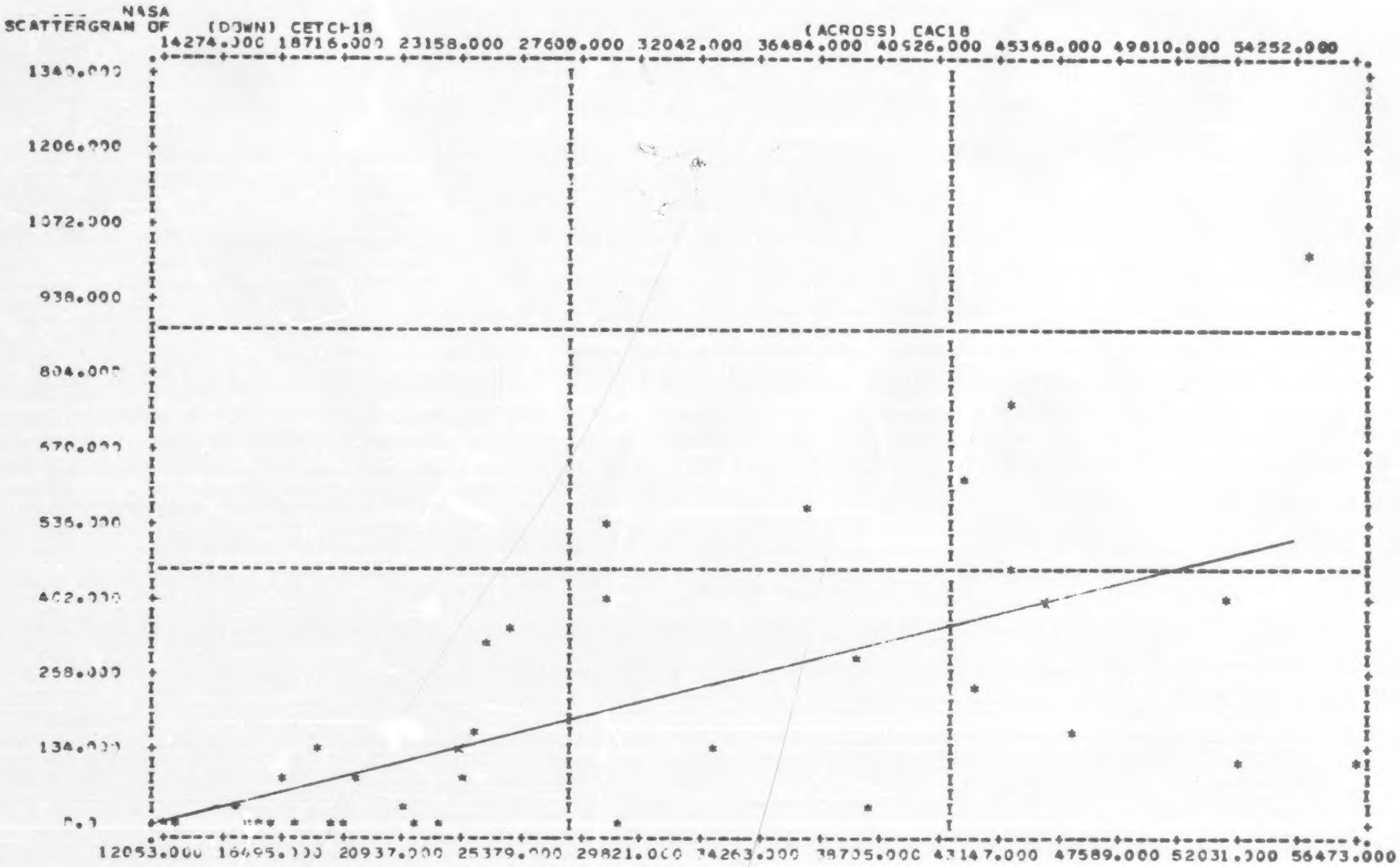
```
             ORC03     ORC06     ORC09     ORC12     ORC15     ORC18

IGPA        0.0419    0.0542    0.0341    0.1312   -0.1531   -0.1914
           (   88)   (  123)   (  135)   (  146)   (  151)   (  125)
           S=0.349   S=0.276   S=0.347   S=0.057   S=0.030   S=0.016

ISCH        0.0450   -0.2212   -0.0199   -0.0550   -0.0612   -0.0264
           (   88)   (  125)   (  136)   (  148)   (  152)   (  126)
           S=0.339   S=0.007   S=0.409   S=0.250   S=0.227   S=0.384

ISH         0.0414    0.1449    0.1910    0.2305   -0.0385   -0.0488
           (   90)   (  129)   (  145)   (  160)   (  158)   (  134)
           S=0.349   S=0.051   S=0.011   S=0.002   S=0.315   S=0.288

IFR        -0.1021    0.0520    0.1196    0.0093    0.1124    0.0809
           (   60)   (   83)   (  102)   (  107)   (   96)   (   77)
           S=0.219   S=0.289   S=0.117   S=0.462   S=0.138   S=0.242

IPR        -0.0414    0.0868    0.1453    0.0691   -0.1062   -0.1305
           (   81)   (  111)   (  118)   (  131)   (  133)   (  116)
           S=0.357   S=0.182   S=0.059   S=0.216   S=0.112   S=0.081

DRIVECUR    0.0504    0.1170    0.1654   -0.0075    0.0189    0.0207
           (   81)   (  111)   (  118)   (  131)   (  133)   (  116)
           S=0.328   S=0.111   S=0.037   S=0.466   S=0.414   S=0.413
```

```
 OSP03     OSP06     OSP09     OSP12     OSP15     OSP18

 0.0548    0.0029    0.0407    0.0536    0.0442   -0.0267
(  158)   (  185)   (  181)   (  196)   (  192)   (  160)
S=0.247   S=0.485   S=0.293   S=0.228   S=0.272   S=0.369

 0.0512   -0.0522    0.0069    0.0280    0.0218   -0.0107
(  157)   (  184)   (  181)   (  194)   (  188)   (  156)
S=0.262   S=0.241   S=0.464   S=0.349   S=0.383   S=0.447

-0.0424   -0.0523    0.0684    0.1042    0.1197    0.0017
(  160)   (  190)   (  188)   (  206)   (  201)   (  169)
S=0.297   S=0.237   S=0.175   S=0.058   S=0.045   S=0.491

 0.0112    0.0335    0.1018    0.2128    0.2441    0.1335
(  104)   (  120)   (  119)   (  127)   (  117)   (   90)
S=0.455   S=0.358   S=0.135   S=0.008   S=0.004   S=0.105

 0.1428    0.1504    0.1171    0.1758    0.1413    0.2176
(  127)   (  151)   (  146)   (  161)   (  157)   (  136)
S=0.055   S=0.033   S=0.080   S=0.013   S=0.039   S=0.005

 0.1306    0.0363    0.1119    0.1709    0.1093    0.1642
(  127)   (  151)   (  146)   (  151)   (  157)   (  136)
S=0.072   S=0.329   S=0.089   S=0.015   S=0.086   S=0.028
```

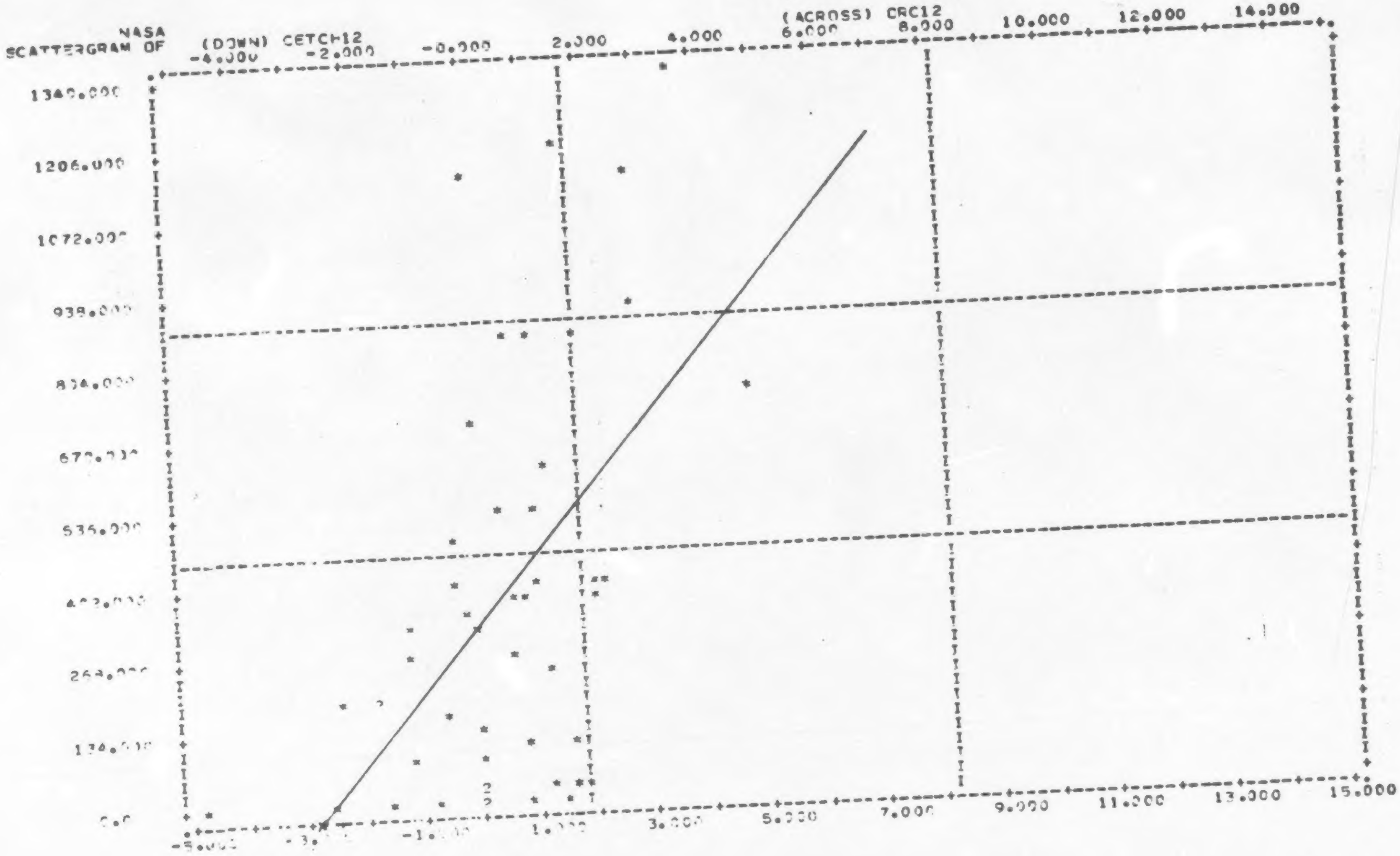
BIVARIATE ABILITY VARIABLES - TOTAL POPULATION (533)
vs.
EACH OTHER AND OCR, OAC, ORC AND OSP

```
            OCT03       OCT06       OCT09       OCT12       OCT15       OCT18

IGPA        -0.1609     -0.1058     -0.1875     -0.1430     -0.1522     -0.1493
            (  165)     (  200)     (  191)     (  206)     (  200)     (  163)
            S=0.019     S=0.068     S=0.005     S=0.020     S=0.016     S=0.029

ISCH         0.0614     -0.0125     -0.0400      0.0211      0.0471     -0.0377
            (  166)     (  202)     (  192)     (  205)     (  197)     (  160)
            S=0.215     S=0.430     S=0.291     S=0.382     S=0.255     S=0.318

ISH         -0.1641     -0.0594     -0.1186     -0.0744     -0.0193      0.0048
            (  170)     (  209)     (  200)     (  218)     (  210)     (  173)
            S=0.016     S=0.196     S=0.047     S=0.137     S=0.390     S=0.475

IFR         -0.1916     -0.1517     -0.0593      0.0098      0.1151      0.0675
            (  110)     (  131)     (  126)     (  134)     (  122)     (   93)
            S=0.022     S=0.042     S=0.255     S=0.455     S=0.103     S=0.260

IPR         -0.1247     -0.0729     -0.0800     -0.1455     -0.1440     -0.0397
            (  133)     (  164)     (  154)     (  168)     (  166)     (  140)
            S=0.076     S=0.177     S=0.162     S=0.030     S=0.032     S=0.321

DRIVECUR    -0.0405      0.0405     -0.0195     -0.0620     -0.1069     -0.0241
            (  133)     (  164)     (  154)     (  168)     (  166)     (  140)
            S=0.321     S=0.303     S=0.405     S=0.212     S=0.085     S=0.399



            OCM03       OCM06       OCM09       OCM12       OCM15       OCM18

IGPA        -0.0479      0.0416      0.0474      0.0473     -0.1319      0.0213
            (  163)     (  198)     (  190)     (  205)     (  193)     (  163)
            S=0.272     S=0.280     S=0.258     S=0.250     S=0.032     S=0.394

ISCH         0.0232      0.0187      0.0515     -0.0277      0.0030     -0.0084
            (  164)     (  200)     (  191)     (  204)     (  195)     (  160)
            S=0.384     S=0.396     S=0.240     S=0.347     S=0.484     S=0.458

ISH         -0.0717      0.0522     -0.0269     -0.0494     -0.1516     -0.0294
            (  168)     (  207)     (  199)     (  217)     (  209)     (  173)
            S=0.178     S=0.228     S=0.353     S=0.234     S=0.014     S=0.350

IFR         -0.1014     -0.0886     -0.0903     -0.0655     -0.0153      0.0736
            (  108)     (  129)     (  123)     (  133)     (  121)     (   93)
            S=0.148     S=0.159     S=0.158     S=0.227     S=0.434     S=0.242

IPR         -0.1003     -0.0299     -0.0745     -0.2159     -0.1824     -0.2034
            (  131)     (  162)     (  153)     (  167)     (  155)     (  140)
            S=0.127     S=0.353     S=0.180     S=0.003     S=0.012     S=0.008

DRIVECUR    -0.0484      0.0465     -0.1345     -0.1092     -0.0672     -0.1909
            (  131)     (  162)     (  153)     (  167)     (  165)     (  140)
            S=0.291     S=0.278     S=0.049     S=0.080     S=0.196     S=0.016
```

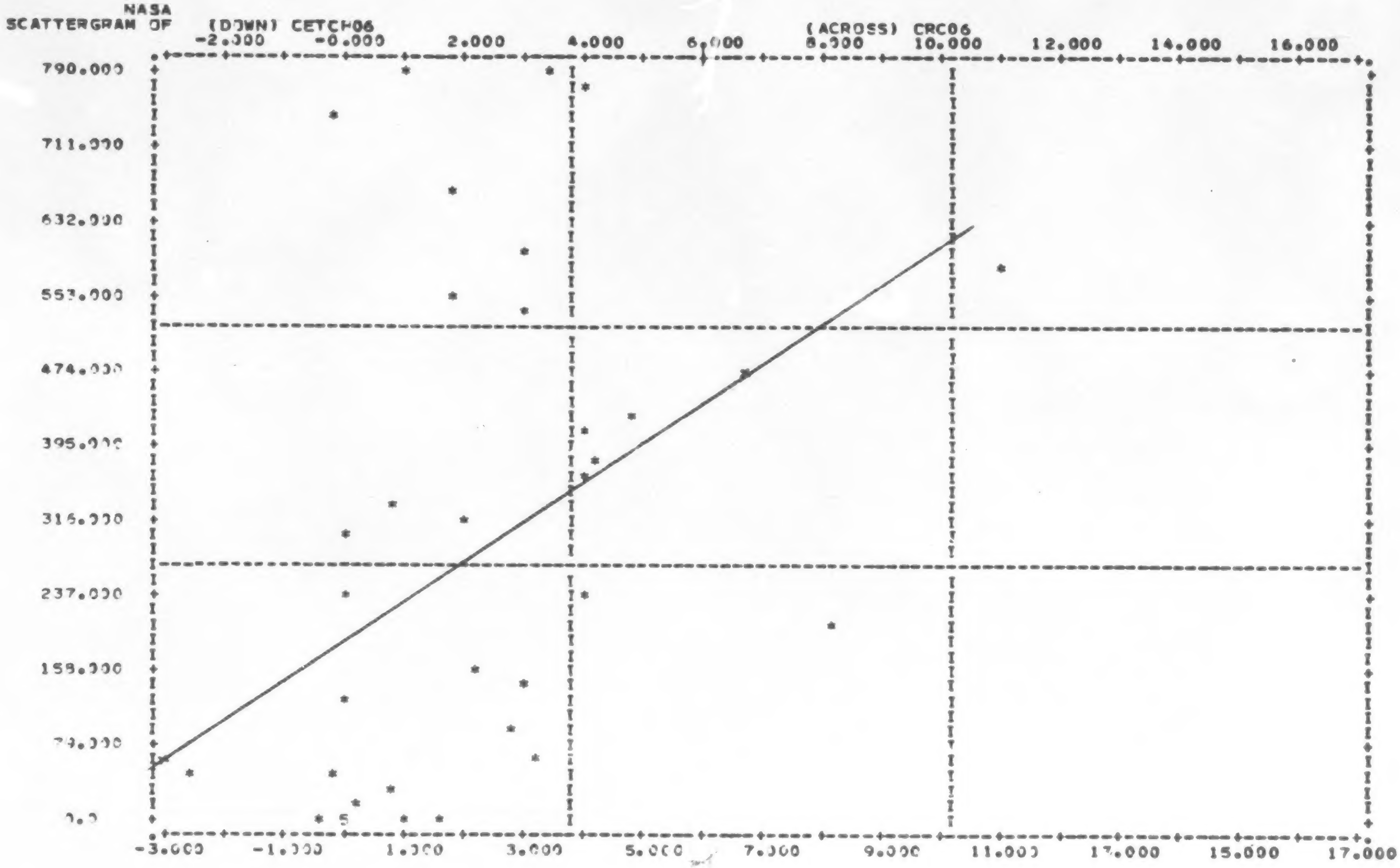
BIVARIATE ABILITY VARIABLES - TOTAL POPULATION (533)
VS.
OCT & OCM



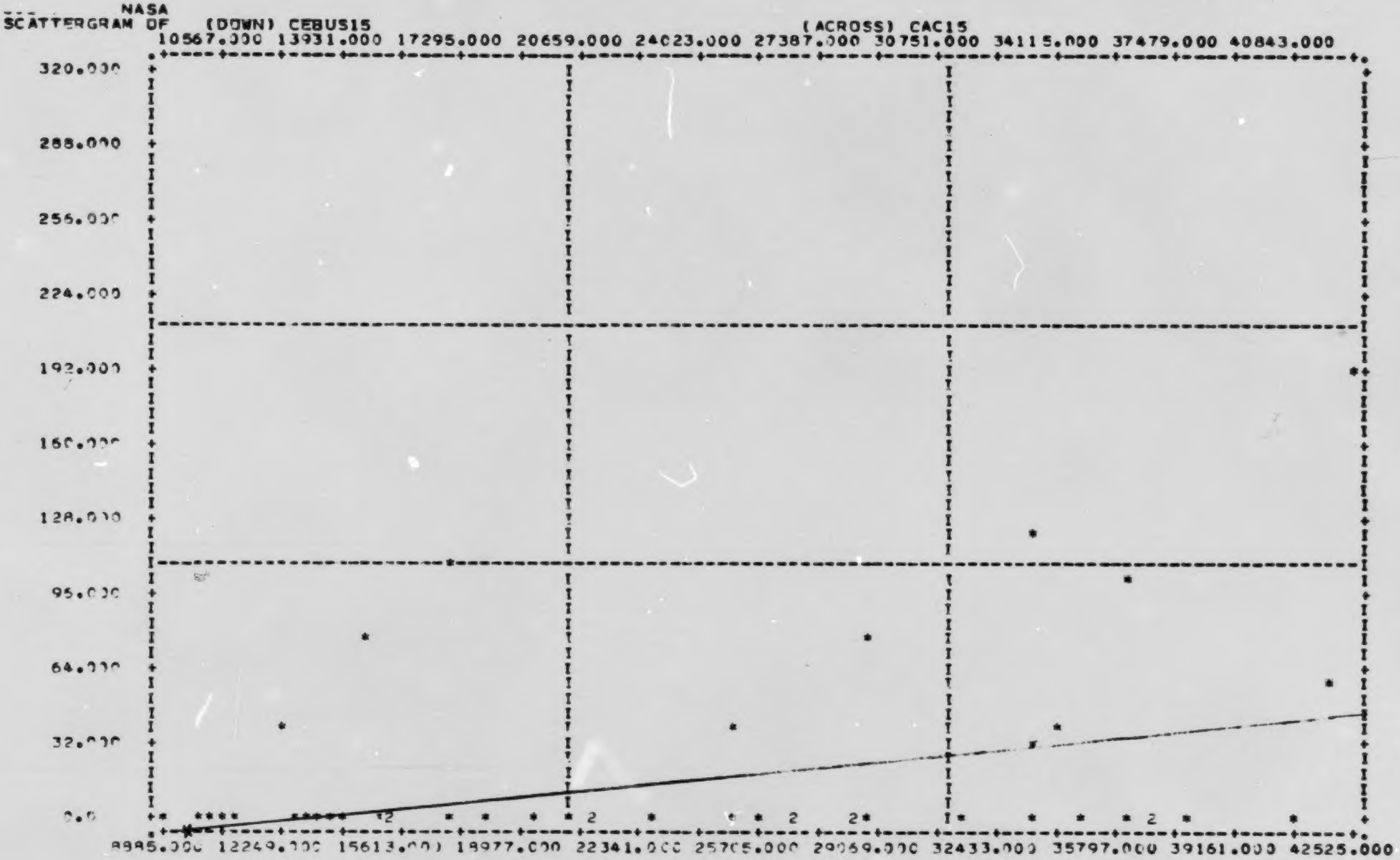
SCATTERGRAM, R = 0.615, CETECH 18 vs. OAC 18, NASA



SCATTERGRAM, R = 0.51, CETECH 12 vs. ORC 12, NASA

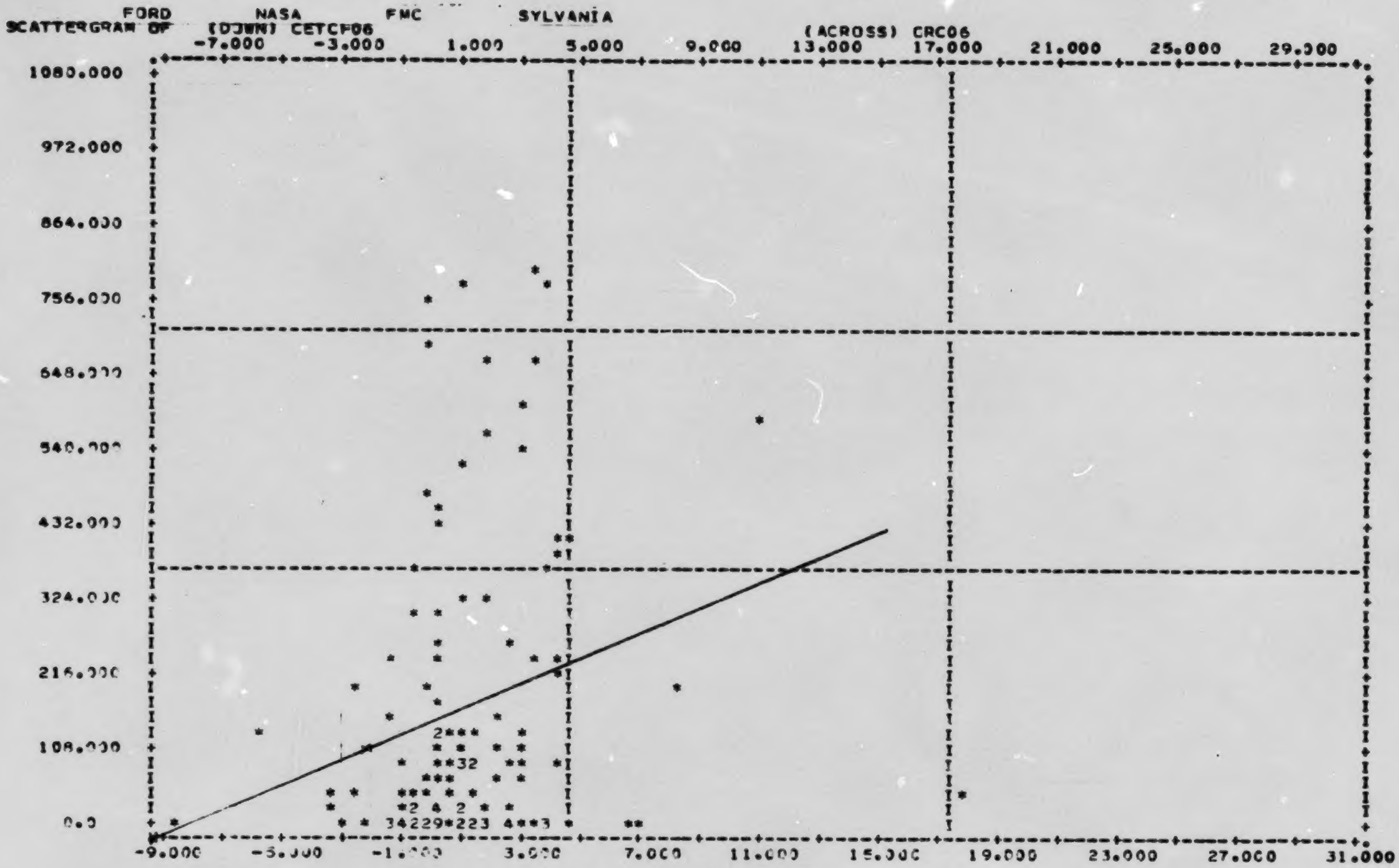


SCATTERGRAM, R = 0.399, CETECH 06 vs. ORC 06, NASA

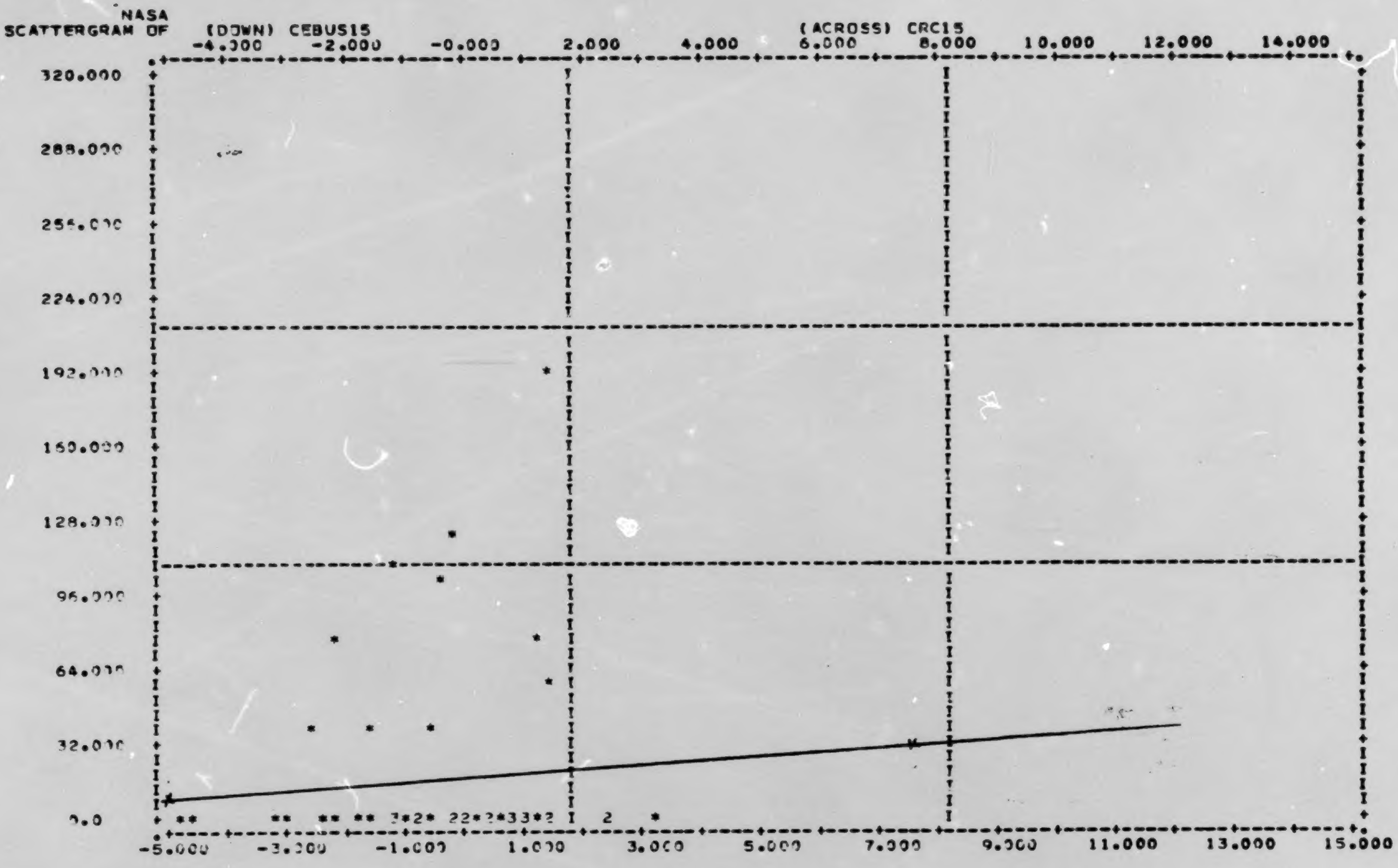


SCATTERGRAM, R = 0.324, CEBUS 15 vs. OAC 15, NASA

APPENDIX 4G



SCATTERGRAM, R = 0.194, CETECH 06 vs. ORC 06, TOTAL GROUP



SCATTERGRAM, R = 0.066, CEBUS 15 vs. ORC 15, NASA

	OAC03	OAC06	OAC09	OAC12	OAC15	OAC18
CETOT	-0.2515 (33) S=0.079	0.1182 (45) S=0.220	0.1951 (51) S=0.085	0.2067 (50) S=0.075	0.1377 (51) S=0.168	-0.0921 (36) S=0.296
CETCH	-0.3233 (33) S=0.033	-0.0697 (45) S=0.325	0.1629 (51) S=0.127	0.1882 (50) S=0.095	0.0647 (51) S=0.326	-0.1702 (36) S=0.161
CEBUS	0.0727 (33) S=0.344	0.2376 (45) S=0.058	0.3269 (51) S=0.010	0.1210 (50) S=0.201	0.1900 (51) S=0.091	0.0010 (36) S=0.498
CEOTH	-0.1864 (33) S=0.149	0.4284 (45) S=0.002	-0.0365 (51) S=0.400	0.0883 (50) S=0.271	0.1343 (51) S=0.174	0.2961 (36) S=0.040
DRIVE	0.3261 (29) S=0.042	0.2523 (35) S=0.072	0.1597 (35) S=0.180	0.0082 (35) S=0.481	-0.0758 (38) S=0.325	0.3794 (30) S=0.019

ORC03	ORC06	ORC09	ORC12	ORC15	ORC18
0.1739 (33) S=0.167	0.0854 (45) S=0.288	0.2005 (51) S=0.079	0.0605 (50) S=0.338	-0.1090 (51) S=0.223	-0.1662 (36) S=0.166
0.0588 (33) S=0.292	0.0590 (45) S=0.350	0.2319 (51) S=0.051	0.0977 (50) S=0.250	-0.1008 (51) S=0.241	-0.1198 (36) S=0.243
0.1474 (33) S=0.206	0.0382 (45) S=0.402	-0.0142 (51) S=0.461	-0.1610 (50) S=0.131	-0.0692 (51) S=0.315	-0.1107 (36) S=0.260
-0.0970 (33) S=0.296	0.0761 (45) S=0.310	-0.0582 (51) S=0.342	-0.0461 (50) S=0.375	-0.0549 (51) S=0.351	-0.0447 (36) S=0.398
0.0213 (29) S=0.455	0.2856 (35) S=0.048	0.3496 (35) S=0.020	0.1203 (35) S=0.246	0.0371 (38) S=0.413	-0.0211 (30) S=0.456

	OSP03	OSP06	OSP09	OSP12	OSP15	OSP18
CETOT	-0.1557 (57) S=0.124	-0.2321 (70) S=0.027	-0.1711 (67) S=0.083	-0.1337 (69) S=0.137	-0.1161 (66) S=0.177	-0.0353 (48) S=0.406
CETCH	-0.1265 (57) S=0.174	-0.2016 (70) S=0.047	-0.1947 (67) S=0.057	-0.1320 (69) S=0.140	-0.0987 (66) S=0.215	-0.1074 (48) S=0.234
CEBUS	-0.0667 (57) S=0.311	-0.0711 (70) S=0.279	0.0964 (67) S=0.219	0.0016 (69) S=0.495	-0.0773 (66) S=0.269	0.1499 (48) S=0.155
CEOTH	-0.0813 (57) S=0.274	-0.0861 (70) S=0.239	-0.0683 (67) S=0.291	-0.0693 (69) S=0.286	-0.0545 (66) S=0.332	0.0868 (48) S=0.279
DRIVE	0.2318 (45) S=0.063	0.0677 (53) S=0.315	0.0182 (49) S=0.451	0.1470 (52) S=0.149	-0.0935 (50) S=0.259	0.2061 (40) S=0.101

OCR	OCR	OCR	OCR	OCR	OCR
0.0561 (81) S=0.309	0.0908 (81) S=0.210	0.0742 (81) S=0.255	0.0892 (81) S=0.214	0.0726 (81) S=0.260	0.0790 (81) S=0.242
0.0002 (81) S=0.499	0.0579 (81) S=0.304	0.0468 (81) S=0.339	0.0627 (81) S=0.289	0.0785 (81) S=0.243	0.0667 (81) S=0.277
0.1454 (81) S=0.098	0.1396 (81) S=0.107	0.1422 (81) S=0.103	0.1670 (81) S=0.068	0.0934 (81) S=0.203	0.1322 (81) S=0.120
-0.1687 (81) S=0.066	-0.1511 (81) S=0.089	-0.1980 (81) S=0.038	-0.1869 (81) S=0.047	-0.1784 (81) S=0.056	-0.1680 (81) S=0.067
0.3497 (63) S=0.002	0.3497 (63) S=0.002	0.3497 (63) S=0.002	0.3497 (63) S=0.002	0.3497 (63) S=0.002	0.3497 (63) S=0.002

	OCM03	OCM06	OCM09	OCM12	OCM15	OCM18
CETOT	0.1688 (63) S=0.093	0.1682 (80) S=0.068	-0.0249 (73) S=0.417	0.1066 (76) S=0.180	-0.2153 (70) S=0.037	-0.0883 (50) S=0.271
CETCH	0.0993 (63) S=0.219	0.1348 (80) S=0.117	0.0435 (73) S=0.357	0.1200 (76) S=0.151	-0.2238 (70) S=0.031	-0.0030 (50) S=0.492
CEBUS	0.1564 (63) S=0.111	0.0467 (80) S=0.340	-0.2120 (73) S=0.036	-0.1975 (76) S=0.044	-0.0930 (70) S=0.222	-0.0971 (50) S=0.251
CEOTH	0.1058 (63) S=0.205	0.1242 (80) S=0.136	-0.0639 (73) S=0.296	0.2409 (76) S=0.018	-0.0080 (70) S=0.474	-0.2273 (50) S=0.056
DRIVE	-0.0561 (49) S=0.351	0.1333 (53) S=0.150	-0.1533 (53) S=0.141	-0.1605 (56) S=0.119	-0.0532 (54) S=0.351	-0.4017 (42) S=0.004

OCT03	OCT06	OCT09	OCT12	OCT15	OCT18
-0.0156 (63) S=0.452	0.0189 (80) S=0.434	-0.0076 (73) S=0.475	0.0472 (76) S=0.343	0.2305 (70) S=0.027	0.0184 (50) S=0.449
-0.0513 (63) S=0.345	-0.0097 (80) S=0.466	-0.0284 (73) S=0.406	0.0152 (76) S=0.448	0.2854 (70) S=0.008	-0.0120 (50) S=0.467
0.0722 (63) S=0.287	0.0221 (80) S=0.423	0.0895 (73) S=0.226	-0.0353 (76) S=0.381	-0.0070 (70) S=0.477	0.0414 (50) S=0.388
0.0326 (63) S=0.400	0.1023 (80) S=0.183	-0.0110 (73) S=0.463	0.2403 (76) S=0.018	-0.0182 (70) S=0.440	0.0705 (50) S=0.313
-0.0064 (49) S=0.483	0.0453 (63) S=0.355	-0.0374 (53) S=0.395	-0.1260 (56) S=0.177	-0.1808 (54) S=0.095	0.2997 (42) S=0.027

APPENDIX 5A

CE AND DRIVE vs. OUTCOMES
Ford - All People

```
       OAC03     OAC06     OAC09     OAC12     OAC15     OAC18

CETOT   0.0114    0.1881    0.3108    0.4063    0.2024   -0.1823
       (   11)   (   16)   (   17)   (   20)   (   23)   (   17)
       S=0.487   S=0.243   S=0.112   S=0.038   S=0.177   S=0.242

CETCH  -0.2365   -0.0076    0.2873    0.4403    0.1273   -0.4256
       (   11)   (   16)   (   17)   (   20)   (   23)   (   17)
       S=0.242   S=0.489   S=0.132   S=0.026   S=0.281   S=0.044

CEBUS   0.2347    0.2143    0.6880    0.0163    0.2824    0.0778
       (   11)   (   16)   (   17)   (   20)   (   23)   (   17)
       S=0.244   S=0.213   S=0.001   S=0.473   S=0.096   S=0.383

CEOTH  -0.3693    0.7605   -0.1615    0.0282    0.1427    0.3365
       (   11)   (   16)   (   17)   (   20)   (   23)   (   17)
       S=0.132   S=0.001   S=0.268   S=0.453   S=0.258   S=0.093

DRIVE  -0.1077   -0.2742    0.2754   -0.0709   -0.2763    0.4681
       (   10)   (   12)   (   11)   (   14)   (   18)   (   14)
       S=0.384   S=0.194   S=0.206   S=0.405   S=0.134   S=0.046
```

```
 ORC03     ORC06     ORC09     ORC12     ORC15     ORC18

 0.4223    0.0160    0.1809    0.0322   -0.1689   -0.1915
(   11)   (   16)   (   17)   (   20)   (   23)   (   17)
S=0.098   S=0.477   S=0.244   S=0.446   S=0.221   S=0.231

 0.2145    0.0426    0.2480    0.1006   -0.1718   -0.1196
(   11)   (   16)   (   17)   (   20)   (   23)   (   17)
S=0.263   S=0.438   S=0.169   S=0.336   S=0.217   S=0.324

 0.3200   -0.0357   -0.1008   -0.4558   -0.0977   -0.2121
(   11)   (   16)   (   17)   (   20)   (   23)   (   17)
S=0.169   S=0.448   S=0.350   S=0.013   S=0.329   S=0.207

-0.8093   -0.0505   -0.1242   -0.0904   -0.1007   -0.0961
(   11)   (   16)   (   17)   (   20)   (   23)   (   17)
S=0.001   S=0.426   S=0.317   S=0.352   S=0.324   S=0.357

-0.2926    0.2201    0.2284   -0.1645   -0.0090   -0.1743
(   10)   (   12)   (   11)   (   14)   (   18)   (   14)
S=0.206   S=0.245   S=0.250   S=0.287   S=0.486   S=0.276
```

```
       OSP03     OSP06     OSP09     OSP12     OSP15     OSP18

CETOT  -0.1627   -0.1553   -0.1980   -0.1505   -0.1333    0.0361
       (   20)   (   28)   (   26)   (   27)   (   27)   (   22)
       S=0.247   S=0.160   S=0.166   S=0.227   S=0.254   S=0.437

CETCH  -0.1305   -0.1657   -0.2293   -0.1484   -0.1264   -0.0924
       (   20)   (   28)   (   26)   (   27)   (   27)   (   22)
       S=0.292   S=0.200   S=0.130   S=0.230   S=0.265   S=0.341

CEBUS  -0.0743   -0.0793    0.2022   -0.0372   -0.0963    0.3406
       (   20)   (   28)   (   26)   (   27)   (   27)   (   22)
       S=0.378   S=0.344   S=0.161   S=0.427   S=0.316   S=0.060

CEOTH  -0.0469   -0.0214   -0.0817   -0.0617   -0.0821    0.0546
       (   20)   (   28)   (   26)   (   27)   (   27)   (   22)
       S=0.422   S=0.457   S=0.346   S=0.380   S=0.342   S=0.338

DRIVE   0.3881    0.2154    0.1976   -0.0158   -0.0642    0.2241
       (   15)   (   20)   (   17)   (   20)   (   21)   (   19)
       S=0.075   S=0.180   S=0.224   S=0.474   S=0.391   S=0.178
```

```
 OCR       OCR       OCR       OCR       OCR       OCR

 0.0521    0.1039    0.0957    0.1405    0.0636    0.0439
(   26)   (   26)   (   26)   (   26)   (   26)   (   26)
S=0.400   S=0.307   S=0.321   S=0.247   S=0.379   S=0.416

-0.0177    0.1060    0.1250    0.1807    0.1824    0.1398
(   26)   (   26)   (   26)   (   26)   (   26)   (   26)
S=0.466   S=0.303   S=0.271   S=0.188   S=0.186   S=0.248

 0.1414    0.1291    0.1328    0.1642   -0.0166   -0.0011
(   26)   (   26)   (   26)   (   26)   (   26)   (   26)
S=0.245   S=0.265   S=0.259   S=0.211   S=0.468   S=0.498

 0.2432   -0.3716   -0.4110   -0.4029   -0.3926   -0.3765
(   26)   (   26)   (   26)   (   26)   (   26)   (   26)
S=0.116   S=0.031   S=0.019   S=0.021   S=0.024   S=0.029

 0.1064    0.1064    0.1064    0.1064    0.1064    0.1064
(   23)   (   23)   (   23)   (   23)   (   23)   (   23)
S=0.314   S=0.314   S=0.314   S=0.314   S=0.314   S=0.314
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       OCM03     OCM06     OCM09     OCM12     OCM15     OCM18

CETOT   0.0995    0.1822   -0.0287    0.3719   -0.1350    0.0985
       (   20)   (   31)   (   27)   (   29)   (   27)   (   22)
       S=0.338   S=0.163   S=0.444   S=0.023   S=0.251   S=0.331

CETCH  -0.0229    0.0891    0.0426    0.3355   -0.2416    0.3192
       (   20)   (   31)   (   27)   (   29)   (   27)   (   22)
       S=0.462   S=0.317   S=0.416   S=0.038   S=0.112   S=0.074

CEBUS   0.2585    0.1730   -0.3313   -0.0432   -0.0078   -0.2126
       (   20)   (   31)   (   27)   (   29)   (   27)   (   22)
       S=0.136   S=0.176   S=0.046   S=0.412   S=0.485   S=0.171

CEOTH  -0.1383    0.1341   -0.0896    0.3426    0.1088   -0.2668
       (   20)   (   31)   (   27)   (   29)   (   27)   (   22)
       S=0.280   S=0.236   S=0.328   S=0.034   S=0.295   S=0.115

DRIVE  -0.4335   -0.0437   -0.0450   -0.3608   -0.0200   -0.6518
       (   15)   (   22)   (   18)   (   21)   (   21)   (   19)
       S=0.053   S=0.423   S=0.430   S=0.054   S=0.466   S=0.001
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 OCT03     OCT06     OCT09     OCT12     OCT15     OCT18

-0.0508    0.0873    0.1932    0.2398    0.2077   -0.1865
(   20)   (   31)   (   27)   (   29)   (   27)   (   22)
S=0.416   S=0.320   S=0.167   S=0.105   S=0.149   S=0.203

-0.2069    0.0281    0.1759    0.1530    0.2358   -0.2627
(   20)   (   31)   (   27)   (   29)   (   27)   (   22)
S=0.191   S=0.440   S=0.190   S=0.214   S=0.118   S=0.119

 0.3218    0.1209    0.1715    0.0047    0.1325   -0.0953
(   20)   (   31)   (   27)   (   29)   (   27)   (   22)
S=0.083   S=0.259   S=0.196   S=0.490   S=0.255   S=0.337

-0.2899    0.0502    0.0326    0.4783    0.0489    0.1102
(   20)   (   31)   (   27)   (   29)   (   27)   (   22)
S=0.108   S=0.394   S=0.436   S=0.004   S=0.404   S=0.313

 0.0489   -0.4375   -0.3046   -0.3796   -0.2184    0.1800
(   15)   (   22)   (   18)   (   21)   (   21)   (   19)
S=0.431   S=0.021   S=0.110   S=0.045   S=0.171   S=0.230
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CE AND DRIVE vs. OUTCOMES

Ford - Masters

APPENDIX 5C

	OAC03	OAC06	OAC09	OAC12	OAC15	OAC18
CETOT	-0.4403 (22) S=0.020	0.0177 (29) S=0.464	-0.0007 (34) S=0.458	-0.0605 (30) S=0.375	0.0024 (28) S=0.495	0.0198 (19) S=0.468
CETCH	-0.3984 (22) S=0.033	-0.2199 (29) S=0.126	-0.0201 (34) S=0.455	-0.1302 (30) S=0.246	-0.0338 (28) S=0.432	-0.0148 (19) S=0.476
CEBUS	0.0145 (22) S=0.474	0.5516 (29) S=0.001	0.0389 (34) S=0.414	0.1786 (30) S=0.172	0.0771 (28) S=0.348	0.0446 (19) S=0.428
CEOTH	-0.2220 (22) S=0.160	0.2743 (29) S=0.075	0.1372 (34) S=0.220	0.1941 (30) S=0.152	0.0978 (28) S=0.310	0.3239 (19) S=0.088
DRIVE	0.4735 (19) S=0.020	0.4330 (23) S=0.020	0.0940 (24) S=0.331	0.0289 (21) S=0.451	0.0343 (20) S=0.443	0.2592 (16) S=0.166

	OSP03	OSP06	OSP09	OSP12	OSP15	CSP18
CETOT	-0.2285 (37) S=0.087	-0.3165 (42) S=0.021	-0.2085 (41) S=0.095	-0.1080 (42) S=0.248	-0.1780 (39) S=0.139	-0.0682 (26) S=0.370
CETCH	-0.1913 (37) S=0.128	-0.2760 (42) S=0.038	-0.2265 (41) S=0.077	-0.1233 (42) S=0.218	-0.1529 (39) S=0.176	-0.1202 (26) S=0.279
CEBUS	-0.0870 (37) S=0.304	-0.0642 (42) S=0.343	0.0711 (41) S=0.329	0.0609 (42) S=0.351	-0.0640 (39) S=0.349	0.1099 (26) S=0.297
CEOTH	-0.1357 (37) S=0.212	-0.1806 (42) S=0.126	-0.0954 (41) S=0.276	-0.0871 (42) S=0.292	-0.1258 (39) S=0.223	0.2799 (26) S=0.083
DRIVE	0.0949 (30) S=0.309	-0.1010 (33) S=0.288	-0.2070 (32) S=0.128	0.2905 (32) S=0.053	-0.1021 (29) S=0.299	0.1960 (21) S=0.197

	OCM03	OCM06	OCM09	OCM12	OCM15	OCM18
CETOT	0.2198 (43) S=0.078	0.1041 (49) S=0.238	-0.0069 (46) S=0.482	-0.1270 (47) S=0.198	-0.2740 (43) S=0.038	-0.2197 (28) S=0.131
CETCH	0.2013 (43) S=0.098	0.1482 (49) S=0.155	0.0635 (46) S=0.338	-0.0556 (47) S=0.355	-0.2162 (43) S=0.080	-0.1536 (28) S=0.218
CEBUS	0.0330 (43) S=0.417	-0.2193 (49) S=0.065	-0.1820 (46) S=0.113	-0.2471 (47) S=0.047	-0.1470 (43) S=0.173	-0.1307 (28) S=0.244
CEOTH	0.1570 (43) S=0.157	0.1009 (49) S=0.245	-0.0332 (46) S=0.413	0.1413 (47) S=0.172	-0.2118 (43) S=0.086	-0.3229 (28) S=0.047
DRIVE	0.1015 (34) S=0.284	0.2264 (38) S=0.085	-0.1648 (35) S=0.172	-0.0894 (35) S=0.305	-0.0415 (33) S=0.409	-0.2407 (23) S=0.134

ORC03	ORC06	ORC09	ORC12	ORC15	ORC18
-0.0865 (22) S=0.351	0.1236 (29) S=0.261	0.1751 (34) S=0.161	0.0401 (30) S=0.417	0.1893 (28) S=0.167	-0.2324 (19) S=0.169
-0.0624 (22) S=0.391	-0.0019 (29) S=0.496	0.1802 (34) S=0.154	0.0569 (30) S=0.383	0.1747 (28) S=0.187	-0.2653 (19) S=0.136
0.1210 (22) S=0.296	0.2109 (29) S=0.136	0.0238 (34) S=0.447	-0.0114 (30) S=0.476	0.0794 (28) S=0.344	0.0721 (19) S=0.385
-0.2353 (22) S=0.146	0.2547 (29) S=0.091	-0.1325 (34) S=0.227	-0.0861 (30) S=0.326	-0.0433 (28) S=0.413	0.3534 (19) S=0.069
0.3745 (19) S=0.057	0.4824 (23) S=0.010	0.3536 (24) S=0.045	0.2100 (21) S=0.181	0.3278 (20) S=0.079	0.2383 (16) S=0.187

OCR	OCR	OCR	OCR	OCR	OCR
0.0092 (55) S=0.473	0.0340 (55) S=0.403	0.0093 (55) S=0.473	0.0137 (55) S=0.460	0.0380 (55) S=0.392	0.0621 (55) S=0.326
-0.0333 (55) S=0.405	-0.0223 (55) S=0.436	-0.0505 (55) S=0.357	-0.0463 (55) S=0.368	-0.0189 (55) S=0.445	-0.0122 (55) S=0.465
0.1586 (55) S=0.124	0.1920 (55) S=0.080	0.1546 (55) S=0.130	0.1647 (55) S=0.115	0.1761 (55) S=0.099	0.2355 (55) S=0.[illegible]42
-0.2139 (55) S=0.058	0.1114 (55) S=0.209	0.0641 (55) S=0.321	0.0561 (55) S=0.342	0.0007 (55) S=0.498	0.[illegible]007 (55) S=0.498
0.4424 (40) S=0.002	0.4424 (40) S=0.002	0.4424 (40) S=0.002	0.4424 (40) S=0.002	0.4424 (40) S=0.002	0.4424 (40) S=0.002

OCT03	OCT06	OCT09	OCT12	OCT15	OCT18
0.0556 (43) S=0.362	-0.0267 (49) S=0.428	-0.2276 (46) S=0.064	-0.1266 (47) S=0.198	0.2633 (43) S=0.044	0.0689 (28) S=0.364
0.1439 (43) S=0.179	-0.0260 (49) S=0.430	-0.2352 (46) S=0.058	-0.0893 (47) S=0.275	0.3171 (43) S=0.019	0.0483 (28) S=0.404
-0.2333 (43) S=0.066	-0.1374 (49) S=0.173	0.0600 (46) S=0.346	-0.0950 (47) S=0.263	-0.1071 (43) S=0.247	0.0042 (28) S=0.492
0.0351 (43) S=0.412	0.1925 (49) S=0.093	-0.1440 (46) S=0.170	-0.0575 (47) S=0.351	-0.2297 (43) S=0.069	0.3313 (28) S=0.043
-0.0240 (34) S=0.446	0.2788 (38) S=0.045	0.0677 (35) S=0.350	0.0370 (35) S=0.416	-0.1581 (33) S=0.190	0.5200 (23) S=0.005

CE AND DRIVE vs. OUTCOMES

Ford - No Masters

APPENDIX 5D

```
         OAC03     OAC06     OAC09     OAC12     OAC15     OAC18

CETOT  99.0000    1.0000   99.0000    0.5971   99.0000   -1.0000
       (     1)  (     2)  (     1)  (     3)  (     3)  (     2)
       S=*****   S=*****   S=*****   S=0.256   S=*****   S=*****

CETCH  99.0000    1.0000   99.0000    0.5971   99.0000   -1.0000
       (     1)  (     2)  (     1)  (     3)  (     3)  (     2)
       S=*****   S=*****   S=*****   S=0.296   S=*****   S=*****

CEBUS  99.0000   99.0000   99.0000   99.0000   99.0000   -1.0000
       (     1)  (     2)  (     1)  (     3)  (     3)  (     2)
       S=*****   S=*****   S=*****   S=*****   S=*****   S=*****

CEOTH  99.0000    1.0000   99.0000   99.0000   99.0000   99.0000
       (     1)  (     2)  (     1)  (     3)  (     3)  (     2)
       S=*****   S=*****   S=*****   S=*****   S=*****   S=*****

DRIVE  99.0000   99.0000   99.0000   -1.0000   -0.9950   99.0000
       (     0)  (     1)  (     1)  (     2)  (     3)  (     1)
       S=*****   S=*****   S=*****   S=*****   S=0.032   S=*****


         OSP03     OSP06     OSP09     OSP12     OSP15     OSP18

CETOT  99.0000   -0.5363    0.3773    0.6534   -0.5352   -0.7809
       (     1)  (     3)  (     3)  (     3)  (     4)  (     4)
       S=*****   S=0.320   S=0.377   S=0.256   S=0.032   S=0.110

CETCH  99.0000   -0.7086    0.3773    0.6534   -0.5385   -0.7826
       (     1)  (     3)  (     3)  (     3)  (     4)  (     4)
       S=*****   S=0.249   S=0.377   S=0.256   S=0.031   S=0.109

CEBUS  99.0000   99.0000   99.0000   99.0000   -0.9289   -0.7789
       (     1)  (     3)  (     3)  (     3)  (     4)  (     4)
       S=*****   S=*****   S=*****   S=*****   S=0.036   S=0.111

CEOTH  99.0000   -0.3273   99.0000   99.0000   99.0000   99.0000
       (     1)  (     3)  (     3)  (     3)  (     4)  (     4)
       S=*****   S=0.394   S=*****   S=*****   S=*****   S=*****

DRIVE  99.0000   99.0000   99.0000    1.0000   -0.5000   -0.1890
       (     0)  (     1)  (     1)  (     2)  (     3)  (     3)
       S=*****   S=*****   S=*****   S=*****   S=0.333   S=0.439


         OCM03     OCM06     OCM09     OCM12     OCM15     OCM18

CETOT  99.0000    0.8250   -0.3773   -0.5164   99.0000    0.8615
       (     1)  (     4)  (     3)  (     4)  (     4)  (     4)
       S=*****   S=0.087   S=0.377   S=0.242   S=*****   S=0.069

CETCH  99.0000    0.7039   -0.3773   -0.5164   99.0000    0.8623
       (     1)  (     4)  (     3)  (     4)  (     4)  (     4)
       S=*****   S=0.146   S=0.377   S=0.242   S=*****   S=0.069

CEBUS  99.0000   99.0000   99.0000   99.0000   99.0000    0.8606
       (     1)  (     4)  (     3)  (     4)  (     4)  (     4)
       S=*****   S=*****   S=*****   S=*****   S=*****   S=0.070

CEOTH  99.0000    0.4714   99.0000   99.0000   99.0000   99.0000
       (     1)  (     4)  (     3)  (     4)  (     4)  (     4)
       S=*****   S=0.264   S=*****   S=*****   S=*****   S=*****

DRIVE  99.0000   99.0000   99.0000   -1.0000   99.0000   -0.5000
       (     0)  (     1)  (     1)  (     2)  (     3)  (     3)
       S=*****   S=*****   S=*****   S=*****   S=*****   S=0.333
```

```
  ORC03     ORC06     ORC09     ORC12     ORC15     ORC18

99.0000    1.0000   99.0000   -0.4062   99.0000   -1.0000
(     1)  (     2)  (     1)  (     3)  (     3)  (     2)
S=*****   S=*****   S=*****   S=0.367   S=*****   S=*****

99.0000    1.0000   99.0000   -0.4062   99.0000   -1.0000
(     1)  (     2)  (     1)  (     3)  (     3)  (     2)
S=*****   S=*****   S=*****   S=0.367   S=*****   S=*****

99.0000   99.0000   99.0000   99.0000   99.0000   -1.0000
(     1)  (     2)  (     1)  (     3)  (     3)  (     2)
S=*****   S=*****   S=*****   S=*****   S=*****   S=*****

99.0000    1.0000   99.0000   99.0000   99.0000   99.0000
(     1)  (     2)  (     1)  (     3)  (     3)  (     2)
S=*****   S=*****   S=*****   S=*****   S=*****   S=*****

99.0000   99.0000   99.0000   -1.0000    0.8978   99.0000
(     0)  (     1)  (     1)  (     2)  (     3)  (     1)
S=*****   S=*****   S=*****   S=*****   S=0.145   S=*****


CCR       CCR       OCR       OCR       OCR       OCR

-1.0000   -1.0000   -1.0000   -1.0000   -1.0000   -1.0000
(     2)  (     2)  (     2)  (     2)  (     2)  (     2)
S=*****   S=*****   S=*****   S=*****   S=*****   S=*****

-1.0000   -1.0000   -1.0000   -1.0000   -1.0000   -1.0000
(     2)  (     2)  (     2)  (     2)  (     2)  (     2)
S=*****   S=*****   S=*****   S=*****   S=*****   S=*****

99.0000   99.0000   99.0000   99.0000   -1.0000   -1.0000
(     2)  (     2)  (     2)  (     2)  (     2)  (     2)
S=*****   S=*****   S=*****   S=*****   S=*****   S=*****

99.0000   99.0000   99.0000   99.0000   99.0000   99.0000
(     2)  (     2)  (     2)  (     2)  (     2)  (     2)
S=*****   S=*****   S=*****   S=*****   S=*****   S=*****

99.0000   99.0000   99.0000   99.0000   99.0000   99.0000
(     1)  (     1)  (     1)  (     1)  (     1)  (     1)
S=*****   S=*****   S=*****   S=*****   S=*****   S=*****


OCT03     OCT06     OCT09     OCT12     OCT15     OCT18

99.0000    0.3515   -0.6134   -0.3944   -0.6101   -0.6048
(     1)  (     4)  (     3)  (     4)  (     4)  (     4)
S=*****   S=0.324   S=0.290   S=0.303   S=0.195   S=0.198

99.0000    0.5342   -0.6134   -0.3944   -0.6026   -0.6026
(     1)  (     4)  (     3)  (     4)  (     4)  (     4)
S=*****   S=0.233   S=0.290   S=0.303   S=0.199   S=0.199

99.0000   99.0000   99.0000   99.0000   -0.6239   -0.6075
(     1)  (     4)  (     3)  (     4)  (     4)  (     4)
S=*****   S=*****   S=*****   S=*****   S=0.188   S=0.196

99.0000   -0.5774   99.0000   99.0000   99.0000   99.0000
(     1)  (     4)  (     3)  (     4)  (     4)  (     4)
S=*****   S=0.211   S=*****   S=*****   S=*****   S=*****

99.0000   99.0000   99.0000    1.0000    0.5000    0.5000
(     0)  (     1)  (     1)  (     2)  (     3)  (     3)
S=*****   S=*****   S=*****   S=*****   S=0.333   S=0.333
```

CE AND DRIVE vs. OUTCOMES

Ford - Doctorate

	OAC03	OAC06	OAC09	OAC12	OAC15	OAC18
CETOT	-0.2951 (25) S=0.076	0.1601 (34) S=0.183	0.1556 (34) S=0.190	0.2204 (32) S=0.113	-0.0325 (36) S=0.425	-0.1339 (24) S=0.266
CETCH	-0.3627 (28) S=0.037	-0.0644 (34) S=0.359	0.1262 (34) S=0.239	0.1850 (32) S=0.155	-0.1524 (36) S=0.187	-0.2244 (24) S=0.146
CEBUS	0.0439 (25) S=0.417	0.2270 (34) S=0.098	0.7495 (34) S=0.001	0.2469 (32) S=0.087	0.1175 (36) S=0.247	0.0409 (24) S=0.425
CEOTH	-0.1650 (25) S=0.215	0.4571 (34) S=0.003	-0.0649 (34) S=0.358	0.1080 (32) S=0.278	0.1260 (36) S=0.232	0.3005 (24) S=0.077
DRIVE	0.2109 (22) S=0.173	0.1156 (28) S=0.279	0.2552 (26) S=0.104	0.0005 (24) S=0.499	-0.0834 (29) S=0.334	0.1937 (20) S=0.207

	ORC03	ORC06	ORC09	ORC12	ORC15	ORC18
CETOT	0.1257 (25) S=0.275	0.2591 (34) S=0.069	0.2356 (34) S=0.090	0.0908 (32) S=0.311	-0.0541 (36) S=0.377	-0.2412 (24) S=0.128
CETCH	0.0509 (25) S=0.405	0.1955 (34) S=0.134	0.2587 (34) S=0.070	0.1326 (32) S=0.235	0.0053 (36) S=0.488	-0.2142 (24) S=0.157
CEBUS	0.1428 (25) S=0.248	0.0883 (34) S=0.310	0.1637 (34) S=0.178	-0.1912 (32) S=0.147	-0.0613 (36) S=0.361	-0.0950 (24) S=0.329
CEOTH	-0.1618 (25) S=0.220	0.2191 (34) S=0.107	-0.0562 (34) S=0.376	-0.0240 (32) S=0.448	-0.1392 (36) S=0.209	-0.0099 (24) S=0.482
DRIVE	0.2216 (22) S=0.161	0.5586 (28) S=0.001	0.5547 (26) S=0.002	0.1096 (24) S=0.305	0.1646 (29) S=0.197	0.0359 (20) S=0.440

	OSP03	OSP06	OSP09	OSP12	OSP15	OSP18
CETOT	-0.1459 (44) S=0.172	-0.2305 (52) S=0.050	-0.1682 (52) S=0.117	-0.1377 (50) S=0.170	-0.1497 (44) S=0.166	-0.0939 (30) S=0.311
CETCH	-0.1239 (44) S=0.212	-0.2063 (52) S=0.071	-0.1971 (52) S=0.081	-0.1298 (50) S=0.184	-0.1331 (44) S=0.195	-0.1477 (30) S=0.218
CEBUS	-0.0531 (44) S=0.366	-0.0646 (52) S=0.324	0.1256 (52) S=0.187	-0.0265 (50) S=0.428	-0.0872 (44) S=0.287	0.0710 (30) S=0.355
CEOTH	-0.0832 (44) S=0.296	-0.0886 (52) S=0.266	-0.0725 (52) S=0.305	-0.0674 (50) S=0.321	-0.0659 (44) S=0.335	0.1326 (30) S=0.242
DRIVE	0.2189 (36) S=0.100	0.1034 (41) S=0.260	0.0143 (40) S=0.465	0.0418 (39) S=0.400	-0.2400 (35) S=0.082	0.1462 (25) S=0.243

	OCR	OCR	OCR	OCR	OCR	OCR
CETOT	0.0379 (45) S=0.402	0.1015 (45) S=0.254	0.0769 (45) S=0.308	0.0641 (45) S=0.338	0.0302 (45) S=0.422	0.0429 (45) S=0.390
CETCH	-0.0185 (45) S=0.452	0.0698 (45) S=0.324	0.0493 (45) S=0.374	0.0495 (45) S=0.373	0.0633 (45) S=0.340	0.0501 (45) S=0.372
CEBUS	0.1304 (45) S=0.197	0.1423 (45) S=0.176	0.1543 (45) S=0.156	0.1568 (45) S=0.152	0.0267 (45) S=0.431	0.0785 (45) S=0.304
CEOTH	-0.0396 (45) S=0.398	-0.1804 (45) S=0.118	-0.2467 (45) S=0.051	-0.2401 (45) S=0.056	-0.2032 (45) S=0.090	-0.1892 (45) S=0.107
DRIVE	0.2784 (39) S=0.043	0.2784 (39) S=0.043	0.2784 (39) S=0.043	0.2784 (39) S=0.043	0.2784 (39) S=0.043	0.2784 (39) S=0.043

	OCM03	OCM06	OCM09	OCM12	OCM15	OCM18
CETOT	0.1945 (47) S=0.095	0.2244 (59) S=0.044	0.0234 (55) S=0.433	0.0953 (54) S=0.247	-0.0891 (47) S=0.276	-0.0577 (32) S=0.377
CETCH	0.1302 (47) S=0.192	0.2168 (59) S=0.050	0.0934 (55) S=0.249	0.0752 (54) S=0.294	-0.1550 (47) S=0.149	-0.0143 (32) S=0.469
CEBUS	0.1470 (47) S=0.162	0.0316 (59) S=0.406	-0.2112 (55) S=0.061	-0.1253 (54) S=0.183	0.1081 (47) S=0.235	0.0210 (32) S=0.455
CEOTH	0.0629 (47) S=0.337	0.0765 (59) S=0.282	-0.0564 (55) S=0.341	0.2762 (54) S=0.022	0.0231 (47) S=0.439	-0.1931 (32) S=0.145
DRIVE	-0.0162 (39) S=0.461	0.0227 (47) S=0.440	-0.1662 (43) S=0.143	-0.0698 (42) S=0.330	-0.1183 (38) S=0.240	-0.4305 (27) S=0.013

	OCT03	OCT06	OCT09	OCT12	OCT15	OCT18
CETOT	0.2075 (47) S=0.081	-0.0028 (59) S=0.491	-0.2005 (55) S=0.071	0.0097 (54) S=0.472	0.1902 (47) S=0.100	-0.0449 (32) S=0.404
CETCH	0.1484 (47) S=0.160	-0.0469 (59) S=0.362	-0.2575 (55) S=0.029	-0.0452 (54) S=0.373	0.2401 (47) S=0.052	-0.0652 (32) S=0.361
CEBUS	0.1438 (47) S=0.168	0.0412 (59) S=0.378	0.1480 (55) S=0.140	0.0094 (54) S=0.473	0.0023 (47) S=0.494	0.0225 (32) S=0.451
CEOTH	0.0425 (47) S=0.388	0.1011 (59) S=0.223	0.0252 (55) S=0.428	0.2692 (54) S=0.025	-0.0257 (47) S=0.432	0.0535 (32) S=0.386
DRIVE	-0.0605 (39) S=0.357	0.2230 (47) S=0.066	0.1258 (43) S=0.211	-0.1278 (42) S=0.210	-0.2227 (38) S=0.089	0.0710 (27) S=0.362

CE AND DRIVE vs. OUTCOMES

Ford - Low Schools

APPENDIX 5F

```
           OAC03     OAC06     OAC09     OAC12     OAC15     OAC18            ORC03     ORC06     ORC09     ORC12     ORC15     ORC18

CETOT     0.3908   -0.0244    0.6455    0.3016    0.6986   -0.1657           0.4727   -0.2861    0.0304   -0.0314   -0.2838   -0.3983
       (      7) (      9) (     10) (     10) (     11) (      6)        (      7) (      9) (     10) (     10) (     11) (      6)
         S=0.193   S=0.475   S=0.022   S=0.199   S=0.008   S=0.377          S=0.142   S=0.228   S=0.467   S=0.466   S=0.199   S=0.217

CETCH     0.1694   -0.0882    0.5113    0.2880    0.6242   -0.2117           0.3328   -0.2675    0.1652   -0.0031   -0.2338    0.2239
       (      7) (      9) (     10) (     10) (     11) (      6)        (      7) (      9) (     10) (     10) (     11) (      6)
         S=0.358   S=0.411   S=0.065   S=0.210   S=0.020   S=0.344          S=0.233   S=0.243   S=0.386   S=0.497   S=0.245   S=0.335

CEBUS     0.3432    0.3835    0.4674    0.0822    0.4366   -0.2665           0.2109   -0.0160   -0.2888   -0.2319   -0.2331   -0.3702
       (      7) (      9) (     10) (     10) (     11) (      6)        (      7) (      9) (     10) (     10) (     11) (      6)
         S=0.226   S=0.154   S=0.087   S=0.411   S=0.090   S=0.305          S=0.325   S=0.484   S=0.209   S=0.260   S=0.245   S=0.235

CEOTH    99.0000    0.4839   99.0000   99.0000    0.4052    0.5826          99.0000   -0.1173   99.0000   99.0000   -0.1607   -0.2917
       (      7) (      9) (     10) (     10) (     11) (      6)        (      7) (      9) (     10) (     10) (     11) (      6)
         S=*****   S=0.093   S=*****   S=*****   S=0.108   S=0.112          S=*****   S=0.382   S=*****   S=*****   S=0.318   S=0.287

DRIVE     0.5540    0.7572   -0.2508    0.1030   -0.6065    0.7775          -0.5922    0.2950    0.0632   -0.0956    0.1372   -0.0183
       (      6) (      6) (      4) (      6) (      6) (      4)        (      6) (      5) (      4) (      6) (      6) (      4)
         S=0.079   S=0.041   S=0.375   S=0.423   S=0.101   S=0.111          S=0.168   S=0.285   S=0.468   S=0.429   S=0.398   S=0.491


           OSP03     OSP06     OSP09     OSP12     OSP15     OSP18              OCR       OCR       OCR       OCR       OCR       OCR

CETOT:    0.1645   -0.2572   -0.1823   -0.1330   -0.0033    0.3929           0.3612    0.2200    0.2376    0.3353    0.3510    0.3264
       (     10) (     13) (     10) (     12) (     14) (     10)        (     12) (     12) (     12) (     12) (     12) (     12)
         S=0.305   S=0.198   S=0.307   S=0.340   S=0.495   S=0.131          S=0.124   S=0.246   S=0.229   S=0.143   S=0.132   S=0.150

CETCH     0.2610   -0.2087   -0.2149   -0.1742   -0.0510   -0.3250           0.2189    0.1344    0.1557    0.2056    0.2237    0.1843
       (     10) (     13) (     10) (     12) (     14) (     10)        (     12) (     12) (     12) (     12) (     12) (     12)
         S=0.233   S=0.247   S=0.276   S=0.294   S=0.431   S=0.180          S=0.247   S=0.339   S=0.314   S=0.261   S=0.242   S=0.283

CEBUS    -0.2647   -0.1453    0.1079    0.0990    0.1286    0.4146           0.2993    0.2973    0.2950    0.3445    0.4430    0.4503
       (     10) (     13) (     10) (     12) (     14) (     10)        (     12) (     12) (     12) (     12) (     12) (     12)
         S=0.230   S=0.318   S=0.383   S=0.380   S=0.331   S=0.117          S=0.172   S=0.174   S=0.176   S=0.136   S=0.075   S=0.071

CEOTH    99.0000   -0.1168   99.0000   99.0000   -0.0764    0.3848          99.0000   99.0000   99.0000   99.0000    0.4692    0.4692
       (     10) (     13) (     10) (     12) (     14) (     10)        (     12) (     12) (     12) (     12) (     12) (     12)
         S=*****   S=0.352   S=*****   S=*****   S=0.398   S=0.136          S=*****   S=*****   S=*****   S=*****   S=0.062   S=0.062

DRIVE    99.0000    0.3227   99.0000    0.6468   -0.3473   -0.5008           0.1709    0.1709    0.1709    0.1709    0.1709    0.1709
       (      6) (      7) (      4) (      7) (      8) (      8)        (      8) (      8) (      8) (      8) (      8) (      8)
         S=*****   S=0.240   S=*****   S=0.058   S=0.200   S=0.103          S=0.343   S=0.343   S=0.343   S=0.343   S=0.343   S=0.343


           OCM03     OCM06     OCM09     OCM12     OCM15     OCM18            OCT03     OCT06     OCT09     OCT12     OCT15     OCT18

CETOT     0.1836    0.0095   -0.3238    0.0719   -0.5887   -0.4245          -0.5129    0.1440    0.6916    0.3648    0.3320   -0.1668
       (     12) (     15) (     12) (     14) (     15) (     10)        (     12) (     15) (     12) (     14) (     15) (     10)
         S=0.284   S=0.487   S=0.152   S=0.403   S=0.010   S=0.111          S=0.044   S=0.304   S=0.006   S=0.100   S=0.113   S=0.323

CETCH     0.0818   -0.0193   -0.2120    0.2574   -0.4239    0.0470          -0.4470    0.1650    0.7385    0.3825    0.4076   -0.4363
       (     12) (     15) (     12) (     14) (     15) (     10)        (     12) (     15) (     12) (     14) (     15) (     10)
         S=0.400   S=0.473   S=0.254   S=0.187   S=0.058   S=0.449          S=0.073   S=0.278   S=0.003   S=0.089   S=0.066   S=0.104

CEBUS     0.2717    0.1050   -0.4362   -0.4946   -0.6240   -0.3226          -0.1130   -0.0959   -0.1527   -0.0474   -0.0771   -0.0490
       (     12) (     15) (     12) (     14) (     15) (     10)        (     12) (     15) (     12) (     14) (     15) (     10)
         S=0.196   S=0.355   S=0.078   S=0.036   S=0.006   S=0.182          S=0.363   S=0.367   S=0.318   S=0.436   S=0.392   S=0.447

CEOTH    99.0000    0.2072   99.0000   99.0000   -0.5141   -0.6161          99.0000   -0.2975   99.0000   99.0000   -0.0475   -0.1083
       (     12) (     15) (     12) (     14) (     15) (     10)        (     12) (     15) (     12) (     14) (     15) (     10)
         S=*****   S=0.229   S=*****   S=*****   S=0.025   S=0.029          S=*****   S=0.141   S=*****   S=*****   S=0.433   S=0.383

DRIVE    -0.0211    0.5186    0.4109   -0.4461    0.4472   -0.3800           0.3453   -0.6054   -0.8254   -0.7559   -0.7122    0.2929
       (      7) (      8) (      5) (      8) (      9) (      8)        (      7) (      8) (      5) (      8) (      9) (      8)
         S=0.482   S=0.094   S=0.246   S=0.134   S=0.114   S=0.177          S=0.224   S=0.056   S=0.043   S=0.015   S=0.016   S=0.24[illegible]
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CE AND DRIVE vs. OUTCOMES
Ford - Top Schools

	JAC03	OAC06	OAC09	OAC12	OAC15	OAC18	ORC03	ORC06	ORC09	ORC12	ORC15	ORC18
CETOT	-0.3144 (14) S=0.137	-0.0285 (16) S=0.458	0.3922 (13) S=0.093	0.6479 (16) S=0.003	0.3025 (17) S=0.119	0.1723 (9) S=0.329	-0.0549 (14) S=0.426	0.4329 (16) S=0.047	0.4767 (13) S=0.050	0.3773 (16) S=0.075	-0.1559 (17) S=0.275	-0.1647 (9) S=0.336
CETCH	-0.3028 (14) S=0.146	-0.1772 (16) S=0.256	0.4051 (13) S=0.085	0.6198 (16) S=0.005	0.1705 (17) S=0.257	0.0919 (9) S=0.407	0.0181 (14) S=0.476	0.3242 (16) S=0.110	0.5072 (13) S=0.038	0.3922 (16) S=0.066	-0.2027 (17) S=0.218	-0.1209 (9) S=0.378
CEBUS	0.0754 (14) S=0.399	0.6155 (16) S=0.006	0.2934 (13) S=0.165	0.4978 (16) S=0.025	0.3500 (17) S=0.084	0.5005 (9) S=0.085	-0.1115 (14) S=0.352	0.3342 (16) S=0.103	0.1692 (13) S=0.290	-0.0102 (16) S=0.485	-0.0974 (17) S=0.355	-0.2882 (9) S=0.226
CEOTH	-0.1419 (14) S=0.314	0.2629 (16) S=0.163	0.0819 (13) S=0.398	0.2241 (16) S=0.202	0.3842 (17) S=0.064	0.2950 (9) S=0.220	-0.2464 (14) S=0.198	0.2661 (16) S=0.160	0.0583 (13) S=0.425	0.1732 (16) S=0.261	-0.0632 (17) S=0.405	-0.1027 (9) S=0.396
DRIVE	0.4872 (12) S=0.054	0.1110 (12) S=0.366	-0.0659 (10) S=0.428	-0.0518 (13) S=0.433	-0.3013 (13) S=0.159	0.8078 (7) S=0.014	0.4093 (12) S=0.093	0.4259 (12) S=0.084	0.3196 (10) S=0.184	0.3937 (13) S=0.092	0.0769 (13) S=0.401	-0.1787 (7) S=0.351

	OSP03	OSP06	OSP09	OSP12	OSP15	OSP18	OCR	CCR	CCR	OCR	OCR	OCR
CETOT	0.0702 (20) S=0.384	-0.1753 (21) S=0.224	-0.1510 (19) S=0.269	-0.1970 (18) S=0.217	-0.1798 (18) S=0.238	0.0365 (11) S=0.458	-0.1452 (18) S=0.283	0.0309 (18) S=0.452	0.1032 (18) S=0.342	0.1302 (18) S=0.303	0.0360 (18) S=0.444	0.0303 (18) S=0.453
CETCH	0.1072 (20) S=0.326	-0.1585 (21) S=0.246	-0.1479 (19) S=0.273	-0.2037 (18) S=0.209	-0.2282 (18) S=0.181	-0.0964 (11) S=0.389	-0.1418 (18) S=0.287	0.0865 (18) S=0.366	0.1791 (18) S=0.239	0.2222 (18) S=0.188	0.2304 (18) S=0.179	0.2135 (18) S=0.197
CEBUS	-0.1398 (20) S=0.278	-0.0589 (21) S=0.400	-0.0477 (19) S=0.423	-0.0820 (18) S=0.373	-0.1186 (18) S=0.320	0.7223 (11) S=0.006	-0.0145 (18) S=0.477	0.1026 (18) S=0.343	0.1764 (18) S=0.242	0.1572 (18) S=0.267	-0.2347 (18) S=0.174	-0.2124 (18) S=0.199
CEOTH	-0.1090 (20) S=0.324	-0.0408 (21) S=0.430	-0.0589 (19) S=0.405	0.1261 (18) S=0.309	-0.1019 (18) S=0.344	0.9735 (11) S=0.001	-0.2106 (18) S=0.201	-0.3660 (18) S=0.068	-0.3653 (18) S=0.068	-0.3637 (18) S=0.069	-0.3496 (18) S=0.078	-0.3496 (18) S=0.078
DRIVE	-0.2899 (17) S=0.129	-0.1420 (17) S=0.293	-0.0452 (15) S=0.437	-0.1250 (14) S=0.335	-0.4348 (13) S=0.069	-0.1722 (9) S=0.329	0.6217 (13) S=0.012	0.6217 (13) S=0.012	0.6217 (13) S=0.012	0.6217 (13) S=0.012	0.6217 (13) S=0.012	0.6217 (13) S=0.012

	OCM03	OCM06	OCM09	OCM12	OCM15	OCM18	OCT03	OCT06	OCT09	OCT12	OCT15	OCT18
CETOT	0.1218 (24) S=0.285	0.1039 (26) S=0.307	0.2238 (22) S=0.158	0.4157 (22) S=0.027	-0.0590 (21) S=0.400	-0.2246 (12) S=0.241	-0.1368 (24) S=0.262	-0.2422 (26) S=0.117	-0.3507 (22) S=0.055	-0.0582 (22) S=0.398	0.0498 (21) S=0.415	-0.1740 (12) S=0.294
CETCH	0.0661 (24) S=0.380	0.1684 (26) S=0.205	0.2524 (22) S=0.129	0.3840 (22) S=0.039	-0.1249 (21) S=0.295	-0.1321 (12) S=0.341	-0.1719 (24) S=0.211	-0.3235 (26) S=0.053	-0.3922 (22) S=0.036	-0.1564 (22) S=0.244	0.1276 (21) S=0.291	-0.2351 (12) S=0.231
CEBUS	0.2917 (24) S=0.083	-0.1112 (26) S=0.294	-0.1324 (22) S=0.278	-0.1753 (22) S=0.218	-0.0078 (21) S=0.487	-0.5983 (12) S=0.020	0.3390 (24) S=0.053	0.3921 (26) S=0.024	0.4636 (22) S=0.015	-0.1801 (22) S=0.211	-0.0699 (21) S=0.382	0.3101 (12) S=0.163
CEOTH	0.0068 (24) S=0.487	-0.1676 (26) S=0.207	0.0219 (22) S=0.461	0.4731 (22) S=0.013	0.0465 (21) S=0.421	-0.3239 (12) S=0.152	-0.2563 (24) S=0.113	-0.0119 (26) S=0.477	-0.1579 (22) S=0.241	0.4443 (22) S=0.019	0.0128 (21) S=0.478	0.4545 (12) S=0.069
DRIVE	0.3723 (20) S=0.053	0.5291 (21) S=0.007	0.1272 (17) S=0.313	-0.1300 (17) S=0.309	-0.1044 (16) S=0.350	-0.4482 (10) S=0.097	0.1869 (20) S=0.223	0.3164 (21) S=0.081	0.1138 (17) S=0.332	-0.0005 (17) S=0.499	-0.3931 (16) S=0.066	0.4193 (10) S=0.114

CE AND DRIVE vs. OUTCOMES

Ford - Low GPA

APPENDIX 5H

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          OAC03     OAC06     OAC09     OAC12     OAC15     OAC18          ORC03     ORC06     ORC09     ORC12     ORC15     ORC18

CETOT   -0.4933    0.0523    0.1418    0.0944    0.0514    0.2099        -0.0717   -0.0975    0.3284   -0.0920   -0.0025    0.1385
        (   11)   (   14)   (   18)   (   15)   (   18)   (    8)        (   11)   (   14)   (   18)   (   15)   (   18)   (    8)
        S=0.062   S=0.430   S=0.287   S=0.369   S=0.420   S=0.309        S=0.417   S=0.370   S=0.092   S=0.372   S=0.496   S=0.372

CETCH   -0.4516   -0.0761    0.0424    0.1984    0.0256   -0.0411        -0.1627   -0.1325    0.3868    0.1199    0.1212    0.2361
        (   11)   (   14)   (   18)   (   15)   (   18)   (    8)        (   11)   (   14)   (   18)   (   15)   (   18)   (    8)
        S=0.082   S=0.398   S=0.434   S=0.239   S=0.460   S=0.461        S=0.316   S=0.326   S=0.056   S=0.335   S=0.316   S=0.287

CEBUS   -0.0902    0.5741    0.4283   -0.4139    0.1281   -0.1692         0.5626    0.0524   -0.1613   -0.7066    0.0437   -0.2404
        (   11)   (   14)   (   18)   (   15)   (   18)   (    8)        (   11)   (   14)   (   18)   (   15)   (   18)   (    8)
        S=0.396   S=0.016   S=0.038   S=0.063   S=0.306   S=0.344        S=0.036   S=0.429   S=0.261   S=0.002   S=0.432   S=0.283

CEOTH   -0.1470    0.4682   -0.0656   -0.3086   -0.0504    0.6714        -0.1481    0.3331   -0.2365   -0.6969   -0.4284   -0.0482
        (   11)   (   14)   (   18)   (   15)   (   18)   (    8)        (   11)   (   14)   (   18)   (   15)   (   18)   (    8)
        S=0.333   S=0.046   S=0.392   S=0.132   S=0.421   S=0.034        S=0.332   S=0.122   S=0.172   S=0.002   S=0.038   S=0.455

DRIVE    0.0400    0.4471    0.0555   -0.4813    0.1226    0.4610         0.3020    0.1414   -0.1049   -0.7616   -0.1786   -0.5746
        (   10)   (   10)   (   10)   (    8)   (   12)   (    7)        (   10)   (   10)   (   10)   (    8)   (   12)   (    7)
        S=0.456   S=0.098   S=0.439   S=0.114   S=0.352   S=0.149        S=0.198   S=0.348   S=0.387   S=0.014   S=0.289   S=0.089


          OSP03     OSP06     OSP09     OSP12     OSP15     OSP18          OCR       OCR       OCR       OCR       OCR       OCR

CETOT   -0.2461   -0.2647   -0.0215   -0.0102    0.1696    0.4170         0.1363    0.2052    0.1856    0.2392    0.2456    0.2454
        (   22)   (   26)   (   24)   (   24)   (   21)   (   14)        (   20)   (   20)   (   20)   (   20)   (   20)   (   20)
        S=0.135   S=0.096   S=0.460   S=0.481   S=0.231   S=0.069        S=0.283   S=0.193   S=0.217   S=0.155   S=0.148   S=0.148

CETCH   -0.2089   -0.2362   -0.1006   -0.0295    0.2234    0.1708         0.0432    0.1167    0.0790    0.1081    0.1143    0.0991
        (   22)   (   26)   (   24)   (   24)   (   21)   (   14)        (   20)   (   20)   (   20)   (   20)   (   20)   (   20)
        S=0.175   S=0.123   S=0.320   S=0.446   S=0.165   S=0.280        S=0.428   S=0.312   S=0.370   S=0.325   S=0.316   S=0.339

CEBUS   -0.1066   -0.0789    0.2036    0.0574    0.0111    0.3562         0.2488    0.2611    0.1936    0.2592    0.2762    0.3403
        (   22)   (   26)   (   24)   (   24)   (   21)   (   14)        (   20)   (   20)   (   20)   (   20)   (   20)   (   20)
        S=0.318   S=0.351   S=0.170   S=0.395   S=0.481   S=0.106        S=0.145   S=0.133   S=0.207   S=0.135   S=0.119   S=0.071

CEOTH   -0.0964   -0.1063   -0.0795   -0.0678   -0.1335    0.3942         0.0614    0.3464    0.3464    0.1478    0.2252    0.3121
        (   22)   (   26)   (   24)   (   24)   (   21)   (   14)        (   20)   (   20)   (   20)   (   20)   (   20)   (   20)
        S=0.335   S=0.303   S=0.356   S=0.376   S=0.282   S=0.082        S=0.399   S=0.067   S=0.067   S=0.267   S=0.170   S=0.090

DRIVE    0.2956    0.0705    0.3874   -0.0650   -0.1510   -0.0245         0.5353    0.5353    0.5353    0.5353    0.5353    0.5353
        (   15)   (   17)   (   14)   (   15)   (   14)   (   11)        (   15)   (   15)   (   15)   (   15)   (   15)   (   15)
        S=0.142   S=0.394   S=0.086   S=0.409   S=0.303   S=0.472        S=0.020   S=0.020   S=0.020   S=0.020   S=0.020   S=0.020


          OCM03     OCM06     OCM09     OCM12     OCM15     OCM18          OCT03     OCT06     OCT09     OCT12     OCT15     OCT18

CETOT    0.0861    0.1432   -0.3738    0.0128   -0.3959   -0.2810        -0.0480   -0.0135    0.0738   -0.0159    0.2316   -0.1313
        (   22)   (   28)   (   25)   (   26)   (   22)   (   15)        (   22)   (   28)   (   25)   (   26)   (   22)   (   15)
        S=0.352   S=0.234   S=0.033   S=0.475   S=0.034   S=0.155        S=0.416   S=0.473   S=0.363   S=0.469   S=0.150   S=0.320

CETCH    0.0685    0.2009   -0.2306    0.1484   -0.2819    0.0079         0.0349    0.0384    0.0692   -0.0150    0.2318   -0.1734
        (   22)   (   28)   (   25)   (   26)   (   22)   (   15)        (   22)   (   28)   (   25)   (   26)   (   22)   (   15)
        S=0.381   S=0.153   S=0.134   S=0.235   S=0.102   S=0.489        S=0.439   S=0.423   S=0.371   S=0.471   S=0.150   S=0.268

CEBUS    0.0528   -0.2896   -0.4073   -0.3029   -0.2559   -0.3909        -0.2810   -0.2632    0.0232    0.0136    0.1025    0.0106
        (   22)   (   28)   (   25)   (   26)   (   22)   (   15)        (   22)   (   28)   (   25)   (   26)   (   22)   (   15)
        S=0.408   S=0.067   S=0.022   S=0.066   S=0.125   S=0.075        S=0.103   S=0.088   S=0.456   S=0.474   S=0.325   S=0.485

CEOTH    0.0300   -0.0391    0.2065   -0.0358   -0.1080   -0.4412         0.1097    0.0674   -0.0925   -0.0673   -0.0773    0.0575
        (   22)   (   28)   (   25)   (   26)   (   22)   (   15)        (   22)   (   28)   (   25)   (   26)   (   22)   (   15)
        S=0.447   S=0.422   S=0.161   S=0.431   S=0.316   S=0.050        S=0.314   S=0.367   S=0.330   S=0.372   S=0.366   S=0.419

DRIVE   -0.0712   -0.0518   -0.3902   -0.3197   -0.2192   -0.7339        -0.0285    0.0873   -0.2485   -0.1233   -0.0459   -0.0910
        (   15)   (   18)   (   15)   (   16)   (   15)   (   12)        (   15)   (   19)   (   15)   (   16)   (   15)   (   12)
        S=0.402   S=0.419   S=0.075   S=0.114   S=0.216   S=0.003        S=0.460   S=0.355   S=0.186   S=0.325   S=0.436   S=0.389
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CE AND DRIVE vs. OUTCOMES

Ford - Mid GPA

APPENDIX 5I

	OAC03	OAC06	OAC09	OAC12	OAC15	OAC18	ORC03	ORC06	ORC09	ORC12	ORC15	ORC18
CETOT	0.2940 (7) S=0.261	0.3173 (13) S=0.145	0.4640 (15) S=0.041	-0.2685 (13) S=0.187	0.0446 (15) S=0.437	-0.2699 (15) S=0.165	0.5150 (7) S=0.118	-0.0474 (13) S=0.439	-0.0447 (15) S=0.437	-0.4159 (13) S=0.079	-0.3920 (15) S=0.074	-0.3312 (15) S=0.114
CETCH	0.3237 (7) S=0.239	0.0427 (13) S=0.445	0.5263 (15) S=0.022	-0.2664 (13) S=0.189	0.0358 (15) S=0.450	-0.3513 (15) S=0.100	0.5476 (7) S=0.102	-0.0386 (13) S=0.450	-0.0197 (15) S=0.472	-0.4528 (13) S=0.060	-0.3813 (15) S=0.080	-0.3290 (15) S=0.116
CEBUS	0.2150 (7) S=0.322	0.2065 (13) S=0.249	-0.3126 (15) S=0.128	-0.0640 (13) S=0.418	0.0395 (15) S=0.444	0.4161 (15) S=0.061	0.3809 (7) S=0.200	-0.0124 (13) S=0.484	-0.0941 (15) S=0.369	0.2598 (13) S=0.196	-0.3070 (15) S=0.133	-0.0097 (15) S=0.486
CEOTH	-0.4101 (7) S=0.180	0.7993 (13) S=0.001	0.0355 (15) S=0.450	0.0090 (13) S=0.488	0.1619 (15) S=0.282	0.4075 (15) S=0.066	-0.7567 (7) S=0.016	-0.0528 (13) S=0.432	-0.0268 (15) S=0.462	-0.0262 (13) S=0.466	-0.2059 (15) S=0.231	0.2987 (15) S=0.140
DRIVE	-0.0778 (6) S=0.442	0.0183 (12) S=0.478	0.4043 (12) S=0.096	0.0168 (10) S=0.482	0.1003 (12) S=0.378	-0.1216 (12) S=0.353	-0.4524 (6) S=0.184	0.3195 (12) S=0.155	0.3897 (12) S=0.105	-0.0289 (10) S=0.468	0.0693 (12) S=0.415	-0.3828 (12) S=0.110

	OSP03	OSP06	OSP09	OSP12	OSP15	OSP18	OCR	OCR	OCR	OCR	OCR	OCR
CETOT	-0.3138 (13) S=0.148	-0.3001 (20) S=0.099	-0.3617 (20) S=0.059	-0.1902 (22) S=0.198	-0.1701 (23) S=0.219	-0.1673 (19) S=0.247	0.2426 (20) S=0.151	0.2019 (20) S=0.197	0.0699 (20) S=0.385	0.0205 (20) S=0.466	0.0610 (20) S=0.399	0.0582 (20) S=0.404
CETCH	-0.2469 (13) S=0.208	-0.2612 (20) S=0.133	-0.3625 (20) S=0.058	-0.2045 (22) S=0.181	-0.1547 (23) S=0.240	-0.2308 (19) S=0.171	0.1789 (20) S=0.225	0.1232 (20) S=0.302	-0.0265 (20) S=0.456	-0.0605 (20) S=0.400	-0.0300 (20) S=0.450	-0.0472 (20) S=0.422
CEBUS	-0.1541 (13) S=0.308	-0.1199 (20) S=0.307	0.0650 (20) S=0.361	0.1696 (22) S=0.225	-0.1315 (23) S=0.275	0.2200 (19) S=0.183	0.1453 (20) S=0.271	0.1453 (20) S=0.271	0.1443 (20) S=0.272	0.1574 (20) S=0.254	0.1989 (20) S=0.200	0.2329 (20) S=0.162
CEOTH	-0.1266 (13) S=0.340	-0.1204 (20) S=0.307	-0.1763 (20) S=0.229	-0.1002 (22) S=0.329	-0.0819 (23) S=0.355	0.5741 (19) S=0.005	0.2611 (20) S=0.133	0.2611 (20) S=0.133	-0.3344 (20) S=0.075	-0.3253 (20) S=0.081	-0.1962 (20) S=0.204	-0.1478 (20) S=0.267
DRIVE	0.1347 (11) S=0.346	0.0672 (16) S=0.402	-0.2214 (16) S=0.205	0.3083 (18) S=0.107	0.1999 (19) S=0.206	0.6227 (16) S=0.005	-0.0346 (19) S=0.444	-0.0346 (19) S=0.444	-0.0346 (19) S=0.444	-0.0346 (19) S=0.444	-0.0346 (19) S=0.444	-0.0346 (19) S=0.444

	OCM03	OCM06	OCM09	OCM12	OCM15	OCM18	OCT03	OCT06	OCT09	OCT12	OCT15	OCT18
CETOT	0.3125 (13) S=0.149	0.3295 (21) S=0.072	0.0555 (21) S=0.406	-0.1832 (22) S=0.207	-0.2276 (23) S=0.148	-0.0003 (19) S=0.500	0.3042 (13) S=0.156	0.5392 (21) S=0.006	0.2779 (21) S=0.111	0.1728 (22) S=0.221	0.3657 (23) S=0.043	0.2069 (19) S=0.198
CETCH	0.1797 (13) S=0.278	0.0771 (21) S=0.370	0.0907 (21) S=0.348	-0.1818 (22) S=0.209	-0.2488 (23) S=0.126	-0.0394 (19) S=0.436	0.1464 (13) S=0.317	0.6408 (21) S=0.001	0.1867 (21) S=0.209	0.1830 (22) S=0.208	0.3826 (23) S=0.036	0.1444 (19) S=0.278
CEBUS	0.2209 (13) S=0.234	0.2416 (21) S=0.146	0.1912 (21) S=0.203	-0.0874 (22) S=0.349	0.0588 (23) S=0.395	0.2822 (19) S=0.121	0.2245 (13) S=0.230	0.0588 (21) S=0.400	0.1036 (21) S=0.328	-0.0871 (22) S=0.350	-0.0300 (23) S=0.446	0.2250 (19) S=0.177
CEOTH	0.2044 (13) S=0.252	0.3810 (21) S=0.044	-0.1532 (21) S=0.254	0.1606 (22) S=0.238	0.0130 (23) S=0.476	-0.2600 (19) S=0.141	0.4076 (13) S=0.083	0.0497 (21) S=0.415	0.2167 (21) S=0.173	-0.0183 (22) S=0.468	0.2225 (23) S=0.154	0.3233 (19) S=0.088
DRIVE	-0.5281 (11) S=0.047	-0.1123 (17) S=0.334	-0.0821 (17) S=0.377	-0.2422 (18) S=0.166	-0.1025 (19) S=0.338	-0.4730 (16) S=0.032	0.0508 (11) S=0.441	-0.2239 (17) S=0.194	-0.1699 (17) S=0.257	-0.4686 (18) S=0.025	0.0331 (19) S=0.446	0.2879 (16) S=0.140

CE AND DRIVE vs. OUTCOMES

Ford - High GPA

	OAC03	OAC06	OAC09	OAC12	OAC15	OAC18
CETOT	-0.1630 (11) S=0.316	0.0730 (16) S=0.394	0.4233 (16) S=0.051	0.0579 (16) S=0.416	-0.0630 (18) S=0.402	-0.2381 (14) S=0.206
CETCH	-0.2041 (11) S=0.274	-0.0953 (16) S=0.363	0.5312 (16) S=0.017	0.1064 (16) S=0.348	-0.0238 (18) S=0.463	-0.2900 (14) S=0.157
CEBUS	0.1224 (11) S=0.360	0.6319 (16) S=0.004	-0.2052 (16) S=0.223	-0.1374 (16) S=0.306	-0.0038 (18) S=0.494	-0.1948 (14) S=0.252
CEOTH	-0.3180 (11) S=0.170	0.5355 (16) S=0.016	-0.0525 (16) S=0.423	-0.2299 (16) S=0.196	-0.1495 (18) S=0.277	0.3202 (14) S=0.132
DRIVE	0.495[illegible] (11) S=0.060	0.4808 (15) S=0.035	0.5689 (11) S=0.034	0.0338 (11) S=0.461	-0.0843 (13) S=0.392	0.0976 (11) S=0.388

ORC03	ORC06	ORC09	ORC12	ORC15	ORC18
0.3622 (11) S=0.137	-0.0576 (16) S=0.416	-0.0610 (16) S=0.411	-0.3615 (16) S=0.084	-0.3385 (18) S=0.085	-0.5191 (14) S=0.029
0.3161 (11) S=0.172	-0.0567 (16) S=0.417	-0.0477 (16) S=0.430	-0.2340 (16) S=0.191	-0.2807 (18) S=0.130	-0.4980 (14) S=0.035
0.1222 (11) S=0.360	0.0251 (16) S=0.463	0.0705 (16) S=0.398	-0.4519 (16) S=0.039	-0.0403 (18) S=0.437	-0.0641 (14) S=0.414
-0.8037 (11) S=0.001	-0.0588 (16) S=0.414	-0.0748 (16) S=0.392	-0.6097 (16) S=0.006	-0.3549 (18) S=0.074	-0.0300 (14) S=0.459
-0.0257 (11) S=0.470	0.2561 (15) S=0.178	0.4252 (11) S=0.096	-0.2384 (11) S=0.240	0.0189 (13) S=0.476	0.1884 (11) S=0.290

	OSP03	OSP06	OSP09	OSP12	OSP15	OSP18
CETOT	-0.1510 (20) S=0.262	-0.2403 (27) S=0.114	-0.3055 (25) S=0.069	-0.1648 (26) S=0.183	-0.1775 (24) S=0.203	-0.1425 (16) S=0.299
CETCH	-0.0829 (20) S=0.364	-0.2283 (27) S=0.126	-0.2972 (25) S=0.075	-0.1685 (26) S=0.205	-0.1236 (24) S=0.283	-0.2805 (16) S=0.146
CEBUS	-0.1571 (20) S=0.254	-0.0226 (27) S=0.455	-0.0114 (25) S=0.478	-0.0322 (26) S=0.438	-0.1297 (24) S=0.273	0.1917 (16) S=0.239
CEOTH	-0.1088 (20) S=0.324	-0.1138 (27) S=0.286	-0.1445 (25) S=0.245	-0.0950 (26) S=0.320	-0.0742 (24) S=0.365	0.1080 (16) S=0.345
DRIVE	0.37[illegible]8 (16) S=0.079	0.0890 (21) S=0.351	-0.2502 (17) S=0.166	0.2804 (19) S=0.122	-0.0589 (17) S=0.411	0.0397 (13) S=0.449

OCR	OCR	OCR	OCR	OCR	OCR
0.1169 (24) S=0.293	0.0913 (24) S=0.336	-0.0799 (24) S=0.355	-0.0867 (24) S=0.344	-0.0072 (24) S=0.487	-0.0033 (24) S=0.494
0.0612 (24) S=0.388	0.0272 (24) S=0.450	-0.1349 (24) S=0.265	-0.1521 (24) S=0.239	-0.1242 (24) S=0.281	-0.1364 (24) S=0.263
0.1648 (24) S=0.221	0.1620 (24) S=0.225	0.1084 (24) S=0.307	0.1638 (24) S=0.222	0.2865 (24) S=0.087	0.3262 (24) S=0.060
0.2415 (24) S=0.128	0.2552 (24) S=0.114	0.0007 (24) S=0.499	-0.1169 (24) S=0.293	-0.0061 (24) S=0.489	0.0181 (24) S=0.467
0.0553 (21) S=0.406	0.0553 (21) S=0.406	0.0553 (21) S=0.406	0.0553 (21) S=0.406	0.0553 (21) S=0.406	0.0553 (21) S=0.406

	OCM03	OCM06	OCM09	OCM12	OCM15	OCM18
CETOT	0.3515 (21) S=0.059	0.2047 (31) S=0.135	-0.1208 (27) S=0.274	-0.1009 (28) S=0.305	-0.2505 (25) S=0.114	0.0977 (16) S=0.359
CETCH	0.2992 (21) S=0.094	0.2203 (31) S=0.117	-0.0036 (27) S=0.493	-0.0223 (28) S=0.455	-0.2746 (25) S=0.092	0.2363 (16) S=0.189
CEBUS	0.1294 (21) S=0.288	-0.2385 (31) S=0.098	-0.1986 (27) S=0.160	-0.2071 (28) S=0.145	-0.0265 (25) S=0.450	0.0133 (16) S=0.481
CEOTH	0.2161 (21) S=0.173	0.2282 (31) S=0.108	-0.0980 (27) S=0.313	0.0174 (28) S=0.465	0.0252 (25) S=0.452	-0.3460 (16) S=0.095
DRIVE	-0.1855 (17) S=0.238	-0.0091 (24) S=0.483	-0.0542 (19) S=0.413	-0.2223 (20) S=0.173	0.0939 (18) S=0.355	-0.6880 (13) S=0.005

OCT03	OCT06	OCT09	OCT12	OCT15	OCT18
0.2009 (21) S=0.191	0.4155 (31) S=0.010	0.2990 (27) S=0.065	0.1669 (28) S=0.198	0.3815 (25) S=0.030	0.1131 (16) S=0.338
0.2253 (21) S=0.163	0.4317 (31) S=0.008	0.2138 (27) S=0.142	0.1423 (28) S=0.235	0.4553 (25) S=0.011	0.1183 (16) S=0.331
-0.0875 (21) S=0.353	-0.1283 (31) S=0.246	0.0600 (27) S=0.383	0.0844 (28) S=0.335	-0.0093 (25) S=0.482	-0.0776 (16) S=0.388
0.3026 (21) S=0.091	0.0975 (31) S=0.301	0.1945 (27) S=0.165	-0.0518 (28) S=0.397	-0.1016 (25) S=0.314	0.0845 (16) S=0.378
0.1870 (17) S=0.235	-0.0249 (24) S=0.452	-0.1140 (19) S=0.321	-0.4590 (20) S=0.021	-0.1362 (18) S=0.295	-0.0124 (13) S=0.484

APPENDIX 5J

CE AND DRIVE vs. OUTCOMES

Ford - Honors

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           OAC03     OAC06     OAC09     OAC12     OAC15     OAC18             ORC03     ORC06     ORC09     ORC12     ORC15     ORC18

CETOT   -0.2905    0.1537    0.1611    0.2737    0.3140    0.0517            0.0504    0.3138    0.3073    0.2127   -0.1233   -0.1555
        (    22)   (    29)  (    35)  (    34)  (    33)  (    22)           (    22)  (    29)  (    35)  (    34)  (    33)  (    22)
        S=0.095   S=0.213   S=0.178   S=0.059   S=0.038   S=0.410           S=0.412   S=0.049   S=0.036   S=0.114   S=0.247   S=0.245

CETCH   -0.3669   -0.0523    0.1045    0.2390    0.2266    0.0093           -0.0544    0.2334    0.3527    0.2287   -0.1333   -0.1253
        (    22)   (    29)  (    35)  (    34)  (    33)  (    22)           (    22)  (    29)  (    35)  (    34)  (    33)  (    22)
        S=0.046   S=0.394   S=0.275   S=0.087   S=0.102   S=0.484           S=0.405   S=0.112   S=0.019   S=0.097   S=0.230   S=0.289

CEBUS    0.0587    0.2220    0.5306    0.1899    0.3081    0.1735            0.1695    0.1074   -0.0687   -0.0653   -0.0806   -0.1558
        (    22)   (    29)  (    35)  (    34)  (    33)  (    22)           (    22)  (    29)  (    35)  (    34)  (    33)  (    22)
        S=0.398   S=0.124   S=0.001   S=0.141   S=0.041   S=0.220           S=0.225   S=0.290   S=0.347   S=0.357   S=0.328   S=0.244

CEOTH   -0.2374    0.4571   -0.0380    0.1452    0.3147    0.1775           -0.2266    0.2421   -0.0524    0.0590   -0.0297   -0.0779
        (    22)   (    29)  (    35)  (    34)  (    33)  (    22)           (    22)  (    29)  (    35)  (    34)  (    33)  (    22)
        S=0.144   S=0.006   S=0.414   S=0.206   S=0.037   S=0.215           S=0.155   S=0.103   S=0.383   S=0.370   S=0.435   S=0.368

DRIVE    0.3467    0.0624    0.0623    0.0259   -0.0038    0.5923            0.2311    0.4077    0.3681    0.2744   -0.0068   -0.0985
        (    18)   (    20)  (    24)  (    24)  (    25)  (    19)           (    18)  (    20)  (    24)  (    24)  (    25)  (    19)
        S=0.079   S=0.397   S=0.386   S=0.452   S=0.493   S=0.001           S=0.178   S=0.037   S=0.038   S=0.097   S=0.487   S=0.344


           OSP03     OSP06     OSP09     OSP12     OSP15     OSP18             OCR       OCR       OCR       OCR       OCR       OCR

CETOT   -0.1924   -0.2520   -0.0991   -0.0880   -0.0978    0.0111            0.0117    0.0917    0.1237    0.1492    0.0935    0.1009
        (    37)   (    43)  (    42)  (    43)  (    42)  (    32)           (    57)  (    57)  (    57)  (    57)  (    57)  (    57)
        S=0.127   S=0.052   S=0.266   S=0.287   S=0.269   S=0.476           S=0.466   S=0.249   S=0.180   S=0.134   S=0.245   S=0.228

CETCH   -0.1611   -0.2131   -0.1328   -0.0904   -0.0767    0.0087           -0.0488    0.0673    0.1115    0.1474    0.1598    0.1498
        (    37)   (    43)  (    42)  (    43)  (    42)  (    32)           (    57)  (    57)  (    57)  (    57)  (    57)  (    57)
        S=0.170   S=0.085   S=0.201   S=0.282   S=0.315   S=0.481           S=0.359   S=0.310   S=0.204   S=0.137   S=0.118   S=0.133

CEBUS   -0.0685   -0.0837    0.2297    0.0234   -0.0940    0.0173            0.1405    0.1446    0.1546    0.1640    0.0061    0.0375
        (    37)   (    43)  (    42)  (    43)  (    42)  (    32)           (    57)  (    57)  (    57)  (    57)  (    57)  (    57)
        S=0.344   S=0.297   S=0.072   S=0.441   S=0.277   S=0.463           S=0.149   S=0.142   S=0.125   S=0.111   S=0.482   S=0.391

CEOTH   -0.1067   -0.0981   -0.0485   -0.0452   -0.0772   -0.0008           -0.2122   -0.2306   -0.2438   -0.2132   -0.2122   -0.2018
        (    37)   (    43)  (    42)  (    43)  (    42)  (    32)           (    57)  (    57)  (    57)  (    57)  (    57)  (    57)
        S=0.265   S=0.266   S=0.380   S=0.387   S=0.313   S=0.498           S=0.056   S=0.042   S=0.034   S=0.056   S=0.056   S=0.066

DRIVE    0.3034    0.0552    0.1533    0.0889   -0.1338    0.2406            0.4940    0.4940    0.4940    0.4940    0.4940    0.4940
        (    29)   (    32)  (    32)  (    33)  (    33)  (    27)           (    42)  (    42)  (    42)  (    42)  (    42)  (    42)
        S=0.055   S=0.382   S=0.201   S=0.311   S=0.229   S=0.113           S=0.001   S=0.001   S=0.001   S=0.001   S=0.001   S=0.001


           OCM03     OCM06     OCM09     OCM12     OCM15     OCM18             OCT03     OCT06     OCT09     OCT12     OCT15     OCT18

CETOT    0.1132    0.1597    0.0236    0.1885   -0.2231   -0.1391           -0.1423   -0.1750   -0.1397   -0.0253    0.1412   -0.0587
        (    42)   (    49)  (    46)  (    48)  (    45)  (    34)           (    42)  (    49)  (    46)  (    48)  (    45)  (    34)
        S=0.238   S=0.136   S=0.438   S=0.100   S=0.070   S=0.216           S=0.184   S=0.115   S=0.177   S=0.432   S=0.177   S=0.371

CETCH    0.0393    0.0988    0.0719    0.1687   -0.2683   -0.0958           -0.2132   -0.2447   -0.1507   -0.0696    0.1801   -0.0743
        (    42)   (    49)  (    46)  (    48)  (    45)  (    34)           (    42)  (    49)  (    46)  (    48)  (    45)  (    34)
        S=0.402   S=0.250   S=0.318   S=0.126   S=0.037   S=0.295           S=0.088   S=0.045   S=0.159   S=0.319   S=0.118   S=0.338

CEBUS    0.1623    0.1409   -0.2640   -0.1969   -0.0484   -0.1601            0.1631    0.0801    0.1838   -0.1843   -0.0293    0.0875
        (    42)   (    49)  (    46)  (    48)  (    45)  (    34)           (    42)  (    49)  (    46)  (    48)  (    45)  (    34)
        S=0.152   S=0.167   S=0.038   S=0.090   S=0.376   S=0.183           S=0.151   S=0.292   S=0.111   S=0.105   S=0.424   S=0.311

CEOTH    0.0763    0.0595   -0.0324    0.2952   -0.0014   -0.2608           -0.1246    0.1085   -0.1442    0.3150    0.0384   -0.0157
        (    42)   (    49)  (    46)  (    48)  (    45)  (    34)           (    42)  (    49)  (    46)  (    48)  (    45)  (    34)
        S=0.315   S=0.342   S=0.415   S=0.021   S=0.496   S=0.068           S=0.216   S=0.229   S=0.170   S=0.015   S=0.401   S=0.465

DRIVE    0.0132    0.2414   -0.2055   -0.1574   -0.2064   -0.3465           -0.1413    0.1025   -0.0384    0.0613   -0.1513    0.4943
        (    32)   (    35)  (    34)  (    36)  (    36)  (    29)           (    32)  (    35)  (    34)  (    36)  (    36)  (    29)
        S=0.471   S=0.078   S=0.122   S=0.180   S=0.114   S=0.033           S=0.219   S=0.278   S=0.481   S=0.361   S=0.189   S=0.003
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<u>CE AND DRIVE vs. OUTCOMES</u>

Ford - No Honors

```
        OAC03   OAC06   OAC09   OAC12   OAC15   OAC18            ORC03   ORC06   ORC09   ORC12   ORC15   ORC18

CETOT   0.2634  0.7870 -0.3772  0.2488  0.0744 -0.0349          -0.0396  0.7999  0.1926 -0.7624 -0.4772 -0.4828
       (    5) (    4) (    8) (    8) (    4) (    4)          (    5) (    4) (    8) (    8) (    4) (    4)
       S=0.334 S=0.106 S=0.178 S=0.276 S=0.463 S=0.483          S=0.475 S=0.100 S=0.324 S=0.014 S=0.261 S=0.259

CETCH  -0.8381 -0.4060 -0.1986  0.1306  0.0807 -0.7619          -0.4485  0.2158  0.0660 -0.7322 -0.4513 -0.1416
       (    5) (    4) (    8) (    8) (    4) (    4)          (    5) (    4) (    8) (    8) (    4) (    4)
       S=0.038 S=0.297 S=0.319 S=0.379 S=0.460 S=0.119          S=0.224 S=0.392 S=0.438 S=0.019 S=0.274 S=0.429

CEBUS   0.7046  0.9678 99.0000  0.3454  0.0631  0.2812           0.2773  0.4830 99.0000 -0.2645 -0.5102 -0.3602
       (    5) (    4) (    8) (    8) (    4) (    4)          (    5) (    4) (    8) (    8) (    4) (    4)
       S=0.092 S=0.016 S=***** S=0.201 S=0.468 S=0.359          S=0.326 S=0.259 S=***** S=0.263 S=0.245 S=0.330

CEOTH  -0.7072 -0.7204 -0.3150  0.3670 -0.0514 99.0000          -0.7066 -0.9397  0.2242 -0.2618 -0.5050 99.0000
       (    5) (    4) (    8) (    8) (    4) (    4)          (    5) (    4) (    8) (    8) (    4) (    4)
       S=0.091 S=0.140 S=0.224 S=0.186 S=0.474 S=*****          S=0.091 S=0.030 S=0.297 S=0.266 S=0.247 S=*****

DRIVE   0.3459  0.0934  0.0103  0.0290 -0.7096  0.6525           0.1923 -0.7181 -0.2188  0.1511  0.7654  0.8393
       (    5) (    4) (    8) (    8) (    4) (    4)          (    5) (    4) (    8) (    8) (    4) (    4)
       S=0.284 S=0.453 S=0.490 S=0.473 S=0.145 S=0.174          S=0.378 S=0.141 S=0.301 S=0.360 S=0.115 S=0.080
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```
        OSP03   OSP06   OSP09   OSP12   OSP15   OSP18            OCR     OCR     OCR     OCR     OCR     OCR

CETOT  -0.4712 -0.5010 -0.4792 -0.3294 -0.1827  0.9559           0.6579  0.7222  0.6884  0.7242  0.7065  0.6981
       (    8) (    7) (    7) (    9) (    8) (    5)          (   11) (   11) (   11) (   11) (   11) (   11)
       S=0.119 S=0.126 S=0.138 S=0.193 S=0.333 S=0.006          S=0.014 S=0.006 S=0.010 S=0.006 S=0.008 S=0.008

CETCH  -0.3498 -0.3414 -0.5030 -0.3182 -0.1667 -0.2912           0.4311  0.4654  0.4322  0.4429  0.4591  0.4426
       (    8) (    7) (    7) (    9) (    8) (    5)          (   11) (   11) (   11) (   11) (   11) (   11)
       S=0.198 S=0.227 S=0.125 S=0.202 S=0.347 S=0.317          S=0.093 S=0.075 S=0.092 S=0.086 S=0.078 S=0.086

CEBUS  -0.1729 -0.2158 99.0000 -0.1963 -0.1575  0.9678           0.4423  0.4423  0.4423  0.5124  0.5930  0.5930
       (    8) (    7) (    7) (    9) (    8) (    5)          (   11) (   11) (   11) (   11) (   11) (   11)
       S=0.341 S=0.321 S=***** S=0.306 S=0.355 S=0.001          S=0.087 S=0.087 S=0.087 S=0.054 S=0.027 S=0.027

CEOTH  -0.2529 -0.1281  0.2491 -0.0176 -0.2185 99.0000          -0.2845  0.1586  0.0796  0.2415  0.1824  0.1824
       (    8) (    7) (    7) (    9) (    8) (    5)          (   11) (   11) (   11) (   11) (   11) (   11)
       S=0.273 S=0.392 S=0.295 S=0.482 S=0.302 S=*****          S=0.198 S=0.321 S=0.408 S=0.237 S=0.296 S=0.296

DRIVE   0.1104  0.0276  0.8018 -0.0153 -0.3276 -0.6421          -0.0548 -0.0548 -0.0548 -0.0548 -0.0548 -0.0548
       (    8) (    7) (    7) (    9) (    8) (    5)          (   11) (   11) (   11) (   11) (   11) (   11)
       S=0.397 S=0.477 S=0.015 S=0.484 S=0.214 S=0.121          S=0.436 S=0.436 S=0.436 S=0.436 S=0.436 S=0.436
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        OCM03   OCM06   OCM09   OCM12   OCM15   OCM18            OCT03   OCT06   OCT09   OCT12   OCT15   OCT18

CETOT   0.2550  0.0402 -0.2891 -0.2593 -0.6448 -0.2772          -0.1706  0.3380  0.5397  0.5498  0.1920 -0.1552
       (    9) (    9) (    8) (    9) (    8) (    5)          (    9) (    9) (    8) (    9) (    8) (    5)
       S=0.254 S=0.459 S=0.244 S=0.250 S=0.042 S=0.326          S=0.330 S=0.187 S=0.084 S=0.063 S=0.324 S=0.402

CETCH  -0.0826 -0.4469 -0.0807 -0.2625 -0.6077 -0.2714          -0.5704  0.4176  0.5419  0.6460  0.1689 -0.9544
       (    9) (    9) (    8) (    9) (    8) (    5)          (    9) (    9) (    8) (    9) (    8) (    5)
       S=0.416 S=0.114 S=0.425 S=0.248 S=0.055 S=0.329          S=0.054 S=0.132 S=0.083 S=0.030 S=0.345 S=0.006

CEBUS   0.3500  0.3354 99.0000 -0.3136 -0.5765 -0.1350           0.3750 -0.0357 99.0000  0.0395  0.2726  0.2659
       (    9) (    9) (    8) (    9) (    8) (    5)          (    9) (    9) (    8) (    9) (    8) (    5)
       S=0.178 S=0.189 S=***** S=0.206 S=0.067 S=0.414          S=0.160 S=0.464 S=***** S=0.460 S=0.257 S=0.333

CEOTH   0.0941  0.4332 -0.3487  0.2775 -0.3343 99.0000          -0.3444  0.0246 -0.0448 -0.2516 -0.1568 99.0000
       (    9) (    9) (    8) (    9) (    8) (    5)          (    9) (    9) (    8) (    9) (    8) (    5)
       S=0.405 S=0.122 S=0.199 S=0.235 S=0.209 S=*****          S=0.182 S=0.475 S=0.458 S=0.257 S=0.355 S=*****

DRIVE  -0.0713  0.2560 -0.4759  0.3223  0.9344  0.6469          -0.3372  0.2102 -0.4046 -0.4938 -0.4576  0.5226
       (    9) (    9) (    8) (    9) (    8) (    5)          (    9) (    9) (    8) (    9) (    8) (    5)
       S=0.428 S=0.253 S=0.117 S=0.199 S=0.001 S=0.119          S=0.187 S=0.294 S=0.160 S=0.088 S=0.127 S=0.183
```

CE AND DRIVE vs. OUTCOMES

Ford - Low IPR

```
        OAC03    OAC06    OAC09    OAC12    OAC15    OAC18

CETOT  -0.6614   0.0585   0.4722   0.5332  -0.4987  -0.3826
       (     4) (     7) (     9) (     7) (    10) (     7)
       S=0.169  S=0.450  S=0.100  S=0.109  S=0.071  S=0.198

CETCH  -0.5888   0.0389   0.4368   0.5148  -0.5273  -0.4543
       (     4) (     7) (     9) (     7) (    10) (     7)
       S=0.206  S=0.467  S=0.120  S=0.119  S=0.059  S=0.153

CEBUS  -0.2815   0.3148   0.8743   0.7905  -0.2747   0.3887
       (     4) (     7) (     9) (     7) (    10) (     7)
       S=0.359  S=0.246  S=0.001  S=0.017  S=0.221  S=0.194

CEOTH   0.9547  99.0000  99.0000  99.0000  -0.1997  99.0000
       (     4) (     7) (     9) (     7) (    10) (     7)
       S=0.023  S=*****  S=*****  S=*****  S=0.290  S=*****

DRIVE  -0.5830   0.3496  -0.0372   0.0135  -0.2456  -0.2920
       (     4) (     7) (     9) (     7) (    10) (     7)
       S=0.208  S=0.221  S=0.462  S=0.489  S=0.247  S=0.263


        OSP03    OSP06    OSP09    OSP12    OSP15    OSP18

CETOT  -0.1375  -0.1706  -0.2818  -0.1734  -0.2558  -0.1385
       (    10) (    11) (    12) (    11) (    10) (     7)
       S=0.352  S=0.308  S=0.187  S=0.305  S=0.238  S=0.384

CETCH  -0.1144  -0.1893  -0.2585  -0.1580  -0.2025  -0.0632
       (    10) (    11) (    12) (    11) (    10) (     7)
       S=0.376  S=0.289  S=0.209  S=0.321  S=0.287  S=0.446

CEBUS  -0.1355   0.1659  -0.2030  -0.2298  -0.2674  -0.3202
       (    10) (    11) (    12) (    11) (    10) (     7)
       S=0.354  S=0.313  S=0.263  S=0.248  S=0.228  S=0.242

CEOTH  -0.0226  99.0000  99.0000  99.0000  -0.1649  99.0000
       (    10) (    11) (    12) (    11) (    10) (     7)
       S=0.475  S=*****  S=*****  S=*****  S=0.324  S=*****

DRIVE   0.5568  -0.1501  -0.7395   0.4131   0.4125   0.6424
       (    10) (    11) (    12) (    11) (    10) (     7)
       S=0.047  S=0.330  S=0.003  S=0.103  S=0.118  S=0.060


        OCM03    OCM06    OCM09    OCM12    OCM15    OCM18

CETOT   0.3594   0.3982   0.3336   0.3513  -0.2712  -0.4631
       (    10) (    11) (    13) (    12) (    11) (     8)
       S=0.154  S=0.113  S=0.133  S=0.131  S=0.210  S=0.124

CETCH   0.3987   0.3930   0.3714   0.3758  -0.2884  -0.5795
       (    10) (    11) (    13) (    12) (    11) (     8)
       S=0.127  S=0.116  S=0.106  S=0.114  S=0.195  S=0.066

CEBUS  -0.2476   0.0231  -0.3358  -0.0932   0.1245   0.6149
       (    10) (    11) (    13) (    12) (    11) (     8)
       S=0.245  S=0.473  S=0.131  S=0.387  S=0.358  S=0.052

CEOTH  -0.5571  99.0000  99.0000  99.0000  -0.4219  99.0000
       (    10) (    11) (    13) (    12) (    11) (     8)
       S=0.047  S=*****  S=*****  S=*****  S=0.098  S=*****

DRIVE  -0.3153   0.2911  -0.4536   0.1602  -0.3391  -0.5167
       (    10) (    11) (    13) (    12) (    11) (     8)
       S=0.187  S=0.193  S=0.060  S=0.310  S=0.154  S=0.095
```

```
 ORC03     ORC06     ORC09     ORC12     ORC15     ORC18

-0.0449    0.4521    0.4513    0.3300   -0.4980   -0.2228
(     4)   (     7)  (     9)  (     7)  (    10)  (     7)
S=0.478   S=0.154   S=0.111   S=0.235   S=0.071   S=0.316

-0.1874    0.4425    0.4441    0.3203   -0.3406   -0.1271
(     4)   (     7)  (     9)  (     7)  (    10)  (     7)
S=0.406   S=0.160   S=0.116   S=0.242   S=0.168   S=0.393

 0.9408    0.1417    0.2636    0.4594   -0.6468   -0.3985
(     4)   (     7)  (     9)  (     7)  (    10)  (     7)
S=0.030   S=0.381   S=0.247   S=0.150   S=0.022   S=0.188

-0.6331   99.0000   99.0000   99.0000   -0.1233   99.0000
(     4)   (     7)  (     9)  (     7)  (    10)  (     7)
S=0.183   S=*****   S=*****   S=*****   S=0.367   S=*****

-0.2665    0.8409    0.5096    0.4193    0.4779    0.5803
(     4)   (     7)  (     9)  (     7)  (    10)  (     7)
S=0.367   S=0.009   S=0.081   S=0.175   S=0.081   S=0.086


 OCR       OCR       OCR       OCR       OCR       OCR

 0.2365    0.2659    0.3011    0.2981    0.3054    0.3290
(    12)   (    12)  (    12)  (    12)  (    12)  (    12)
S=0.230   S=0.202   S=0.171   S=0.173   S=0.167   S=0.148

 0.2363    0.2582    0.2928    0.2934    0.2990    0.2993
(    12)   (    12)  (    12)  (    12)  (    12)  (    12)
S=0.230   S=0.209   S=0.178   S=0.177   S=0.173   S=0.172

99.0000    0.0574    0.0830    0.1818    0.1134    0.2347
(    12)   (    12)  (    12)  (    12)  (    12)  (    12)
S=*****   S=0.430   S=0.399   S=0.286   S=0.363   S=0.231

 0.0082    0.0082    0.0082    0.0082    0.0583    0.0583
(    12)   (    12)  (    12)  (    12)  (    12)  (    12)
S=0.490   S=0.490   S=0.490   S=0.490   S=0.429   S=0.429

-0.1923   -0.1923   -0.1923   -0.1923   -0.1923   -0.1923
(    12)   (    12)  (    12)  (    12)  (    12)  (    12)
S=0.275   S=0.275   S=0.275   S=0.275   S=0.275   S=0.275


 OCT03     OCT06     OCT09     OCT12     OCT15     OCT18

-0.4722   -0.3334   -0.3476   -0.5080   -0.0995   -0.0038
(    10)   (    11)  (    13)  (    12)  (    11)  (     8)
S=0.084   S=0.158   S=0.122   S=0.046   S=0.386   S=0.496

-0.4337   -0.3886   -0.3981   -0.5144   -0.0610   -0.0291
(    10)   (    11)  (    13)  (    12)  (    11)  (     8)
S=0.105   S=0.119   S=0.089   S=0.044   S=0.429   S=0.473

-0.2010    0.4811    0.4491   -0.1596   -0.1299    0.1183
(    10)   (    11)  (    13)  (    12)  (    11)  (     8)
S=0.289   S=0.067   S=0.062   S=0.310   S=0.352   S=0.390

-0.2010   99.0000   99.0000   99.0000   -0.4949   99.0000
(    10)   (    11)  (    13)  (    12)  (    11)  (     8)
S=0.289   S=*****   S=*****   S=*****   S=0.061   S=*****

 0.0514    0.4067    0.5152   -0.3719   -0.1141   -0.0285
(    10)   (    11)  (    13)  (    12)  (    11)  (     8)
S=0.444   S=0.107   S=0.036   S=0.117   S=0.369   S=0.473
```

CE AND DRIVE vs. OUTCOMES

Ford - Mid IPR

	OAC03	OAC06	OAC09	OAC12	OAC15	OAC18
CETOT	-0.2904 (8) S=0.243	0.1542 (8) S=0.358	0.3727 (8) S=0.182	-0.4894 (9) S=0.091	-0.4266 (6) S=0.199	0.3527 (7) S=0.219
CETCH	-0.3075 (8) S=0.229	-0.1557 (8) S=0.356	0.2908 (8) S=0.242	-0.0965 (9) S=0.402	-0.1813 (6) S=0.366	-0.0202 (7) S=0.483
CEBUS	0.8274 (8) S=0.006	0.8277 (8) S=0.006	0.1657 (8) S=0.347	-0.5615 (9) S=0.058	-0.6452 (6) S=0.083	-0.5352 (7) S=0.108
CEOTH	0.3691 (8) S=0.184	0.2446 (8) S=0.280	0.4301 (8) S=0.144	-0.3082 (9) S=0.210	-0.1219 (6) S=0.409	0.7841 (7) S=0.018
DRIVE	0.1623 (8) S=0.350	-0.0620 (8) S=0.442	0.4117 (8) S=0.155	-0.1253 (9) S=0.374	-0.1800 (6) S=0.366	0.2703 (7) S=0.279

	OSP03	OSP06	OSP09	OSP12	OSP15	OSP18
CETOT	-0.2605 (9) S=0.249	-0.2755 (14) S=0.170	0.0004 (12) S=0.500	0.1216 (11) S=0.361	-0.0020 (10) S=0.498	0.0714 (8) S=0.433
CETCH	-0.2636 (9) S=0.247	-0.2303 (14) S=0.214	-0.1442 (12) S=0.327	-0.6013 (11) S=0.025	-0.3632 (10) S=0.137	-0.4216 (8) S=0.149
CEBUS	-0.1017 (9) S=0.397	-0.0481 (14) S=0.435	0.1958 (12) S=0.267	0.5660 (11) S=0.035	0.5972 (10) S=0.034	-0.0464 (8) S=0.457
CEOTH	-0.1530 (9) S=0.347	-0.1749 (14) S=0.275	-0.1438 (12) S=0.328	0.0380 (11) S=0.456	-0.3314 (10) S=0.175	0.3289 (8) S=0.213
DRIVE	0.4329 (9) S=0.122	0.1609 (14) S=0.291	0.1561 (12) S=0.271	0.4279 (11) S=0.095	-0.0992 (10) S=0.393	0.0983 (8) S=0.408

	OCM03	OCM06	OCM09	OCM12	OCM15	OCM18
CETOT	0.6464 (10) S=0.022	0.2379 (15) S=0.197	0.2988 (12) S=0.173	0.0292 (11) S=0.466	0.3108 (10) S=0.191	0.0259 (6) S=0.476
CETCH	0.6548 (10) S=0.020	0.3649 (15) S=0.091	0.5497 (12) S=0.032	0.2575 (11) S=0.222	0.4263 (10) S=0.110	0.7172 (8) S=0.023
CEBUS	-0.0454 (10) S=0.450	-0.3022 (15) S=0.137	-0.2362 (12) S=0.230	-0.1031 (11) S=0.381	0.2490 (10) S=0.244	0.0383 (8) S=0.464
CEOTH	0.4066 (10) S=0.122	0.0681 (15) S=0.405	-0.1176 (12) S=0.358	-0.1751 (11) S=0.303	-0.1385 (10) S=0.351	-0.3436 (8) S=0.202
DRIVE	-0.5837 (10) S=0.038	0.3477 (15) S=0.102	-0.0653 (12) S=0.420	-0.1690 (11) S=0.310	0.2854 (10) S=0.212	0.0000 (8) S=0.500

ORC03	ORC06	ORC09	ORC12	ORC15	ORC18
0.3676 (8) S=0.185	0.0043 (8) S=0.496	-0.0930 (8) S=0.413	-0.3981 (9) S=0.144	-0.8669 (6) S=0.013	-0.5955 (7) S=0.079
0.3678 (8) S=0.185	-0.4049 (8) S=0.160	-0.0375 (8) S=0.465	0.0508 (9) S=0.448	0.0615 (6) S=0.454	0.4271 (7) S=0.170
0.2118 (8) S=0.307	0.3665 (8) S=0.186	-0.2334 (8) S=0.289	-0.3647 (9) S=0.153	-0.5151 (6) S=0.148	-0.7373 (7) S=0.029
-0.4524 (8) S=0.130	0.7277 (8) S=0.020	0.1675 (8) S=0.346	-0.5913 (9) S=0.047	-0.7557 (6) S=0.028	-0.3170 (7) S=0.244
0.1316 (8) S=0.378	0.1289 (8) S=0.381	0.4628 (8) S=0.124	-0.4645 (9) S=0.104	-0.6267 (6) S=0.092	-0.7025 (7) S=0.039

OCR	OCR	OCR	OCR	OCR	OCR
-0.1847 (9) S=0.317	-0.1361 (9) S=0.363	-0.3479 (9) S=0.179	-0.3143 (9) S=0.205	-0.2369 (9) S=0.270	-0.2369 (9) S=0.270
-0.3369 (9) S=0.188	0.1045 (9) S=0.394	-0.2641 (9) S=0.246	-0.1015 (9) S=0.397	-0.1733 (9) S=0.328	-0.1733 (9) S=0.328
-0.3369 (9) S=0.188	-0.1753 (9) S=0.326	-0.2760 (9) S=0.236	-0.2760 (9) S=0.236	-0.2012 (9) S=0.302	-0.2012 (9) S=0.302
0.3241 (9) S=0.197	0.3241 (9) S=0.197	0.3241 (9) S=0.197	0.4787 (9) S=0.096	0.4787 (9) S=0.096	0.4787 (9) S=0.096
-0.3916 (9) S=0.149	-0.3916 (9) S=0.149	-0.3916 (9) S=0.149	-0.3916 (9) S=0.149	-0.3916 (9) S=0.149	-0.3916 (9) S=0.149

OCT03	OCT06	OCT09	OCT12	OCT15	OCT18
0.4020 (10) S=0.125	0.3774 (15) S=0.083	0.4787 (12) S=0.058	0.0874 (11) S=0.399	0.0703 (10) S=0.423	0.1524 (8) S=0.359
0.3821 (10) S=0.138	0.3578 (15) S=0.095	0.3782 (12) S=0.113	0.0066 (11) S=0.492	0.0208 (10) S=0.477	0.2292 (8) S=0.293
-0.3333 (10) S=0.173	-0.0633 (15) S=0.411	0.2295 (12) S=0.237	0.0329 (11) S=0.462	0.1851 (10) S=0.304	0.0479 (8) S=0.455
0.5168 (10) S=0.063	0.2513 (15) S=0.183	-0.2444 (12) S=0.222	0.1624 (11) S=0.317	-0.1077 (10) S=0.384	0.0437 (8) S=0.459
0.7678 (10) S=0.005	0.2568 (15) S=0.178	0.2686 (12) S=0.199	0.4366 (11) S=0.090	0.6102 (10) S=0.031	0.1770 (8) S=0.337

CE AND DRIVE vs. OUTCOMES

Ford - High IPR

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       OAC03   OAC06   OAC09   OAC12   OAC15   OAC18          ORC03   ORC06   ORC09   ORC12   ORC15   ORC18

CETOT -0.5345  0.5834  0.2776  0.4522  0.7248 -0.7081        -0.1522  0.7193  0.4150  0.3316  0.4762  0.3621
      (    7) (    7) (   18) (   14) (    8) (    5)        (    7) (    7) (   18) (   14) (    8) (    5)
      S=0.108 S=0.085 S=0.132 S=0.052 S=0.021 S=0.090        S=0.372 S=0.034 S=0.043 S=0.123 S=0.116 S=0.275

CETCH -0.4509  0.5680  0.2467  0.4889  0.6204  0.0048        -0.0627  0.7593  0.4383  0.3681  0.3244  0.0588
      (    7) (    7) (   18) (   14) (    8) (    5)        (    7) (    7) (   18) (   14) (    8) (    5)
      S=0.155 S=0.092 S=0.162 S=0.038 S=0.050 S=0.497        S=0.447 S=0.024 S=0.034 S=0.098 S=0.217 S=0.463

CEBUS -0.2710 -0.1455  0.1360  0.0551  0.2839 -0.8025        -0.1413 -0.2177 -0.0713 -0.0515  0.3720  0.2556
      (    7) (    7) (   18) (   14) (    8) (    5)        (    7) (    7) (   18) (   14) (    8) (    5)
      S=0.278 S=0.376 S=0.295 S=0.426 S=0.248 S=0.051        S=0.381 S=0.320 S=0.389 S=0.431 S=0.182 S=0.339

CEOTH -0.4789  0.2113  0.0644 -0.3830  0.4242  0.2514        -0.5227 -0.5449 -0.2903 -0.2193 -0.0296  0.4041
      (    7) (    7) (   18) (   14) (    8) (    5)        (    7) (    7) (   18) (   14) (    8) (    5)
      S=0.138 S=0.325 S=0.400 S=0.088 S=0.147 S=0.342        S=0.114 S=0.103 S=0.121 S=0.226 S=0.472 S=0.250

DRIVE  0.6890  0.9078  0.5486 -0.0653 -0.5378  0.3790         0.1602  0.3409  0.5138  0.2960 -0.3893 -0.3364
      (    6) (    4) (   11) (    8) (    5) (    5)        (    6) (    4) (   11) (    8) (    5) (    5)
      S=0.065 S=0.046 S=0.040 S=0.439 S=0.175 S=0.265        S=0.381 S=0.330 S=0.053 S=0.238 S=0.259 S=0.290
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       OSP03   OSP06   OSP09   OSP12   OSP15   OSP18          OCR     OCR     OCR     OCR     OCR     OCR

CETOT -0.3416 -0.2809 -0.1045 -0.2710  0.0103  0.5932         0.3230  0.3471  0.3632  0.3725  0.3141  0.3300
      (   12) (   14) (   15) (   14) (   10) (    6)        (   16) (   16) (   16) (   16) (   16) (   16)
      S=0.139 S=0.165 S=0.355 S=0.174 S=0.489 S=0.107        S=0.111 S=0.094 S=0.083 S=0.078 S=0.118 S=0.106

CETCH -0.2721 -0.2353 -0.1527 -0.2369 -0.1245 -0.3233         0.1964  0.2833  0.3010  0.2825  0.2672  0.2742
      (   12) (   14) (   15) (   14) (   10) (    6)        (   16) (   16) (   16) (   16) (   16) (   16)
      S=0.196 S=0.209 S=0.293 S=0.207 S=0.366 S=0.266        S=0.233 S=0.144 S=0.129 S=0.145 S=0.159 S=0.152

CEBUS -0.1037 -0.1035  0.3916 -0.2117  0.2990  0.9446         0.3749  0.3757  0.4368  0.4401  0.3159  0.3381
      (   12) (   14) (   15) (   14) (   10) (    6)        (   16) (   16) (   16) (   16) (   16) (   16)
      S=0.374 S=0.362 S=0.074 S=0.234 S=0.201 S=0.002        S=0.076 S=0.076 S=0.045 S=0.044 S=0.117 S=0.100

CEOTH -0.1962 -0.1699 -0.1735  0.3032 -0.2858 -0.2825        -0.3153 -0.3153 -0.3030 -0.3030 -0.2436 -0.2436
      (   12) (   14) (   15) (   14) (   10) (    6)        (   16) (   16) (   16) (   16) (   16) (   16)
      S=0.271 S=0.281 S=0.268 S=0.146 S=0.208 S=0.294        S=0.117 S=0.117 S=0.127 S=0.127 S=0.182 S=0.182

DRIVE  0.4667  0.3682  0.4100  0.6265 -0.6072 -0.6790         0.4527  0.4527  0.4527  0.4527  0.4527  0.4527
      (    8) (    9) (   10) (    9) (    6) (    5)        (   12) (   12) (   12) (   12) (   12) (   12)
      S=0.122 S=0.165 S=0.120 S=0.036 S=0.101 S=0.104        S=0.070 S=0.070 S=0.070 S=0.070 S=0.070 S=0.070
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       OCM03   OCM06   OCM09   OCM12   OCM15   OCM18          OCT03   OCT06   OCT09   OCT12   OCT15   OCT18

CETOT  0.4145  0.4995  0.0905  0.2029 -0.4729 -0.1945        -0.1364 -0.4356 -0.2284 -0.4009  0.2551  0.0660
      (   13) (   15) (   17) (   16) (   11) (    7)        (   13) (   15) (   17) (   16) (   11) (    7)
      S=0.080 S=0.029 S=0.365 S=0.226 S=0.071 S=0.338        S=0.328 S=0.052 S=0.189 S=0.062 S=0.224 S=0.444

CETCH  0.3560  0.4789  0.1393  0.3679 -0.2430  0.2641        -0.0199 -0.3810 -0.1463 -0.3835  0.3752  0.2285
      (   13) (   15) (   17) (   16) (   11) (    7)        (   13) (   15) (   17) (   16) (   11) (    7)
      S=0.116 S=0.035 S=0.297 S=0.080 S=0.236 S=0.284        S=0.474 S=0.081 S=0.288 S=0.071 S=0.128 S=0.311

CEBUS  0.0442 -0.1369 -0.2575 -0.5033 -0.4247 -0.2825        -0.4079 -0.3658 -0.3506 -0.1635 -0.0923 -0.1900
      (   13) (   15) (   17) (   16) (   11) (    7)        (   13) (   15) (   17) (   16) (   11) (    7)
      S=0.443 S=0.313 S=0.159 S=0.023 S=0.096 S=0.270        S=0.083 S=0.090 S=0.084 S=0.273 S=0.394 S=0.342

CEOTH  0.3168  0.3278 -0.1097 -0.2616 -0.2756 -0.5092         0.1936  0.2972 -0.1963  0.2581 -0.2473  0.5189
      (   13) (   15) (   17) (   16) (   11) (    7)        (   13) (   15) (   17) (   16) (   11) (    7)
      S=0.144 S=0.116 S=0.338 S=0.164 S=0.206 S=0.122        S=0.263 S=0.141 S=0.225 S=0.167 S=0.232 S=0.116

DRIVE -0.4195 -0.1044 -0.3695 -0.3961  0.1098 -0.1245        -0.2819  0.1219 -0.1505  0.0828 -0.0333  0.6763
      (    8) (    9) (   11) (   10) (    7) (    6)        (    8) (    9) (   11) (   10) (    7) (    6)
      S=0.150 S=0.395 S=0.132 S=0.129 S=0.407 S=0.407        S=0.249 S=0.377 S=0.329 S=0.410 S=0.472 S=0.070
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CE AND DRIVE vs. OUTCOMES

Ford - Low IFR

	OAC03	OAC06	OAC09	OAC12	OAC15	OAC18
CETOT	-0.3078 (5) S=0.307	0.6751 (6) S=0.071	0.1809 (7) S=0.349	0.1129 (7) S=0.405	0.5438 (8) S=0.082	0.3361 (5) S=0.290
CETCH	-0.5359 (5) S=0.176	-0.1283 (6) S=0.404	0.1768 (7) S=0.352	-0.0125 (7) S=0.489	0.5768 (8) S=0.067	0.0233 (5) S=0.485
CEBUS	0.0007 (5) S=0.500	0.8330 (6) S=0.020	0.2814 (7) S=0.271	-0.0014 (7) S=0.499	0.3410 (8) S=0.204	0.3455 (5) S=0.285
CEOTH	0.9241 (5) S=0.012	99.0000 (6) S=******	-0.0882 (7) S=0.425	0.6915 (7) S=0.043	0.1562 (8) S=0.356	0.5590 (5) S=0.164
DRIVE	-0.3099 (5) S=0.305	-0.5917 (6) S=0.108	-0.3594 (7) S=0.214	0.0562 (7) S=0.452	-0.6461 (7) S=0.058	0.9987 (4) S=0.001

	OSP03	OSP06	OSP09	OSP12	OSP15	OSP18
CETOT	-0.2535 (10) S=0.240	-0.1445 (12) S=0.327	-0.2124 (13) S=0.243	-0.0653 (13) S=0.416	0.6809 (11) S=0.011	0.5253 (6) S=0.142
CETCH	-0.1144 (10) S=0.376	-0.1404 (12) S=0.332	-0.2022 (13) S=0.254	-0.2131 (13) S=0.242	0.6970 (11) S=0.009	0.1295 (6) S=0.403
CEBUS	-0.2123 (10) S=0.278	-0.0432 (12) S=0.447	-0.2146 (13) S=0.241	0.5017 (13) S=0.040	0.5165 (11) S=0.052	0.7301 (6) S=0.050
CEOTH	0.8669 (10) S=0.001	99.0000 (12) S=******	0.5615 (13) S=0.023	0.2914 (13) S=0.167	0.3967 (11) S=0.114	0.5716 (6) S=0.118
DRIVE	0.1101 (9) S=0.389	0.2765 (11) S=0.205	0.0763 (11) S=0.412	0.5968 (11) S=0.026	-0.6664 (9) S=0.025	-0.0051 (5) S=0.497

	OCM03	OCM06	OCM09	OCM12	OCM15	OCM18
CETOT	0.4700 (11) S=0.072	-0.0509 (14) S=0.431	-0.1034 (14) S=0.363	-0.0809 (13) S=0.396	-0.5239 (11) S=0.049	-0.4497 (6) S=0.185
CETCH	0.2436 (11) S=0.235	-0.4276 (14) S=0.064	0.0830 (14) S=0.389	-0.0855 (13) S=0.391	-0.5182 (11) S=0.051	-0.0885 (6) S=0.434
CEBUS	0.3536 (11) S=0.143	0.2511 (14) S=0.193	-0.3747 (14) S=0.093	-0.2373 (13) S=0.217	-0.4356 (11) S=0.090	-0.6727 (6) S=0.072
CEOTH	-0.3963 (11) S=0.114	0.3580 (14) S=0.104	-0.1698 (14) S=0.281	0.2712 (13) S=0.185	-0.5458 (11) S=0.041	-0.4889 (6) S=0.163
DRIVE	-0.3256 (10) S=0.179	0.2594 (13) S=0.197	0.2494 (12) S=0.217	-0.0103 (11) S=0.488	0.5034 (9) S=0.085	0.3045 (5) S=0.309

APPENDIX 5P

ORC03	ORC06	ORC09	ORC12	ORC15	ORC18
0.4956 (5) S=0.198	0.4362 (6) S=0.194	-0.2398 (7) S=0.302	-0.4177 (7) S=0.176	-0.2027 (8) S=0.315	0.3898 (5) S=0.258
0.0929 (5) S=0.441	0.1153 (6) S=0.414	-0.2107 (7) S=0.325	-0.3544 (7) S=0.218	-0.1978 (8) S=0.319	0.6617 (5) S=0.142
0.4362 (5) S=0.231	0.3568 (6) S=0.244	-0.0003 (7) S=0.500	-0.3198 (7) S=0.242	-0.1897 (8) S=0.326	-0.1841 (5) S=0.383
-0.1091 (5) S=0.431	99.0000 (6) S=******	-0.0185 (7) S=0.484	-0.1372 (7) S=0.385	-0.1219 (8) S=0.387	-0.0646 (5) S=0.459
-0.7174 (5) S=0.086	-0.2962 (6) S=0.284	0.1145 (7) S=0.403	0.3190 (7) S=0.243	0.2772 (7) S=0.274	0.6829 (4) S=0.159

CCR	OCR	CCR	OCR	OCR	GCR
0.4876 (14) S=0.038	0.5180 (14) S=0.029	0.5444 (14) S=0.022	0.6161 (14) S=0.009	0.5985 (14) S=0.012	0.6002 (14) S=0.012
0.4007 (14) S=0.078	0.4081 (14) S=0.074	0.4564 (14) S=0.050	0.4948 (14) S=0.036	0.4755 (14) S=0.043	0.4701 (14) S=0.045
0.2656 (14) S=0.179	0.2759 (14) S=0.170	0.2779 (14) S=0.168	0.3131 (14) S=0.138	0.3788 (14) S=0.091	0.3924 (14) S=0.083
0.0024 (14) S=0.497	0.1180 (14) S=0.344	0.1180 (14) S=0.344	0.1177 (14) S=0.344	0.1667 (14) S=0.284	0.1667 (14) S=0.284
-0.4575 (11) S=0.079	-0.4575 (11) S=0.079	-0.4575 (11) S=0.079	-0.4575 (11) S=0.079	-0.4575 (11) S=0.079	-0.4575 (11) S=0.079

OCT03	OCT06	OCT09	OCT12	OCT15	OCT18
-0.0533 (11) S=0.438	0.2106 (14) S=0.235	0.3934 (14) S=0.082	0.5733 (13) S=0.020	0.1237 (11) S=0.359	-0.5682 (6) S=0.120
-0.2591 (11) S=0.221	0.2684 (14) S=0.177	0.3270 (14) S=0.127	0.6006 (13) S=0.015	0.1449 (11) S=0.335	-0.2436 (6) S=0.321
0.1914 (11) S=0.286	-0.0247 (14) S=0.467	0.2087 (14) S=0.237	0.1024 (13) S=0.370	0.0508 (11) S=0.441	-0.6776 (6) S=0.070
-0.2782 (11) S=0.204	0.0643 (14) S=0.414	0.0388 (14) S=0.448	-0.1157 (13) S=0.353	-0.1488 (11) S=0.331	-0.4889 (6) S=0.163
0.4635 (10) S=0.089	-0.0574 (13) S=0.413	-0.2443 (12) S=0.222	-0.3152 (11) S=0.173	0.0[illegible] (9) S=0.500	0.3180 (5) S=0.301

CE AND DRIVE vs. OUTCOMES

Ford - Mid IFR

	OAC03	OAC06	OAC09	OAC12	OAC15	OAC18
CETOT	-0.1370 (6) S=0.398	0.3547 (9) S=0.175	-0.6130 (9) S=0.040	-0.3160 (12) S=0.159	-0.3967 (11) S=0.114	-0.0464 (10) S=0.449
CETCH	-0.1631 (6) S=0.379	0.0193 (9) S=0.480	-0.6122 (9) S=0.040	-0.3125 (12) S=0.161	-0.4941 (11) S=0.061	-0.3220 (10) S=0.182
CEBUS	0.8296 (6) S=0.021	0.7783 (9) S=0.007	-0.0865 (9) S=0.412	0.0377 (12) S=0.454	-0.2448 (11) S=0.234	0.2190 (10) S=0.272
CEOTH	0.2828 (6) S=0.294	0.2172 (9) S=0.287	-0.0434 (9) S=0.456	-0.0618 (12) S=0.424	-0.2163 (11) S=0.261	0.4213 (10) S=0.113
DRIVE	0.7421 (6) S=0.046	0.4763 (9) S=0.097	-0.4037 (7) S=0.185	-0.3712 (9) S=0.163	-0.3996 (8) S=0.163	0.1357 (9) S=0.364

	OSP03	OSP06	OSP09	OSP12	OSP15	OSP18
CETOT	-0.2595 (11) S=0.220	-0.4087 (14) S=0.073	-0.3671 (12) S=0.120	-0.1628 (14) S=0.266	-0.2029 (16) S=0.226	-0.1324 (12) S=0.341
CETCH	-0.2549 (11) S=0.225	-0.4434 (14) S=0.056	-0.3449 (12) S=0.136	-0.1382 (14) S=0.319	-0.1245 (16) S=0.323	-0.1205 (12) S=0.355
CEBUS	-0.0257 (11) S=0.470	-0.0572 (14) S=0.423	-0.1120 (12) S=0.365	-0.0671 (14) S=0.410	-0.1565 (16) S=0.281	-0.0445 (12) S=0.445
CEOTH	-0.1014 (11) S=0.383	-0.2427 (14) S=0.202	-0.1744 (12) S=0.294	-0.1442 (14) S=0.311	-0.0993 (16) S=0.357	0.0039 (12) S=0.495
DRIVE	0.4458 (10) S=0.098	-0.3747 (12) S=0.115	-0.5370 (10) S=0.055	0.2553 (11) S=0.224	-0.1858 (13) S=0.272	0.4519 (10) S=0.095

	OCM03	OCM06	OCM09	OCM12	OCM15	OCM18
CETOT	0.3863 (12) S=0.107	-0.0471 (15) S=0.434	0.3358 (12) S=0.143	0.0018 (14) S=0.498	0.0182 (16) S=0.473	-0.2243 (12) S=0.242
CETCH	0.3965 (12) S=0.101	0.2641 (15) S=0.171	0.5310 (12) S=0.038	-0.0023 (14) S=0.497	-0.0036 (16) S=0.495	-0.1632 (12) S=0.306
CEBUS	-0.2075 (12) S=0.259	-0.3247 (15) S=0.119	-0.1371 (12) S=0.336	0.0 (14) S=0.500	0.1238 (16) S=0.324	0.1374 (12) S=0.335
CEOTH	-0.3078 (12) S=0.165	-0.0852 (15) S=0.381	-0.4264 (12) S=0.083	0.0278 (14) S=0.462	-0.0756 (16) S=0.390	-0.2765 (12) S=0.192
DRIVE	-0.3947 (11) S=0.109	-0.0417 (13) S=0.446	-0.3722 (10) S=0.145	0.0940 (11) S=0.392	-0.1287 (13) S=0.338	-0.6747 (10) S=0.016

ORC03	ORC06	ORC09	ORC12	ORC15	ORC18
0.2699 (6) S=0.302	0.4319 (9) S=0.123	0.2537 (9) S=0.255	-0.3384 (12) S=0.141	-0.2637 (11) S=0.217	-0.3113 (10) S=0.191
0.2743 (6) S=0.299	0.2852 (9) S=0.228	0.1516 (9) S=0.348	-0.1784 (12) S=0.290	-0.2505 (11) S=0.229	-0.1408 (10) S=0.349
0.2011 (6) S=0.351	0.1961 (9) S=0.307	0.1655 (9) S=0.316	-0.3709 (12) S=0.118	-0.2259 (11) S=0.252	-0.2811 (10) S=0.216
-0.6120 (6) S=0.098	0.4209 (9) S=0.130	-0.0269 (9) S=0.473	-0.6688 (12) S=0.009	-0.1437 (11) S=0.337	-0.1293 (10) S=0.361
0.8776 (6) S=0.115	0.8462 (9) S=0.002	0.5192 (7) S=0.116	-0.1461 (9) S=0.354	0.0671 (8) S=0.437	-0.0289 (9) S=0.471

OCR	OCR	OCR	OCR	OCR	OCR
-0.1533 (10) S=0.336	0.0740 (10) S=0.420	0.0832 (10) S=0.410	0.1235 (10) S=0.367	0.2111 (10) S=0.279	0.2134 (10) S=0.277
-0.3305 (10) S=0.175	0.0851 (10) S=0.408	0.0926 (10) S=0.400	0.1235 (10) S=0.367	0.1432 (10) S=0.347	0.1195 (10) S=0.371
-0.0476 (10) S=0.448	0.0105 (10) S=0.489	0.0114 (10) S=0.487	0.0114 (10) S=0.487	0.1866 (10) S=0.303	0.2420 (10) S=0.250
0.2141 (10) S=0.276	0.2141 (10) S=0.276	0.2141 (10) S=0.276	0.2647 (10) S=0.230	0.2647 (10) S=0.230	0.2647 (10) S=0.230
-0.2218 (9) S=0.283	-0.2218 (9) S=0.283	-0.2218 (9) S=0.283	-0.2218 (9) S=0.283	-0.2218 (9) S=0.283	-0.2218 (9) S=0.283

OCT03	OCT06	OCT09	OCT12	OCT15	OCT18
-0.2360 (12) S=0.230	0.1315 (15) S=0.320	-0.0358 (12) S=0.456	-0.1666 (14) S=0.285	0.1607 (16) S=0.276	0.2824 (12) S=0.187
-0.2184 (12) S=0.248	-0.0690 (15) S=0.404	-0.3708 (12) S=0.118	-0.1369 (14) S=0.320	0.2166 (16) S=0.210	0.0645 (12) S=0.421
-0.2751 (12) S=0.193	0.1569 (15) S=0.288	0.3702 (12) S=0.118	-0.0345 (14) S=0.453	0.1302 (16) S=0.315	0.3433 (12) S=0.137
-0.4080 (12) S=0.094	0.2127 (15) S=0.223	-0.0629 (12) S=0.423	-0.1497 (14) S=0.305	-0.2724 (16) S=0.154	0.1955 (12) S=0.271
-0.0628 (11) S=0.427	0.4178 (13) S=0.078	0.3718 (10) S=0.145	-0.4500 (11) S=0.082	-0.0856 (13) S=0.390	0.3745 (10) S=0.143

CE AND DRIVE vs. OUTCOMES

Ford - High IFR

```
          ORC03     ORC06     ORC09     ORC12     ORC15     ORC18

CETOT   -0.2547   -0.0444    0.0961    0.1015   -0.1352   -0.1988
        (   21)   (   33)   (   37)   (   34)   (   29)   (   21)
        S=0.133   S=0.403   S=0.266   S=0.284   S=0.242   S=0.194

CETCH   -0.2204   -0.1728    0.1518    0.1529   -0.1383   -0.1295
        (   21)   (   33)   (   37)   (   34)   (   29)   (   21)
        S=0.169   S=0.168   S=0.185   S=0.194   S=0.237   S=0.288

CEBUS    0.0960    0.3289   -0.0877   -0.1634   -0.0915   -0.1266
        (   21)   (   33)   (   37)   (   34)   (   29)   (   21)
        S=0.339   S=0.031   S=0.303   S=0.178   S=0.319   S=0.292

CEOTH   -0.3286    0.1933   -0.0430   -0.0195   -0.0818   -0.0776
        (   21)   (   33)   (   37)   (   34)   (   29)   (   21)
        S=0.073   S=0.141   S=0.400   S=0.456   S=0.337   S=0.369

DRIVE    0.3507    0.3231    0.2072    0.0356    0.0233   -0.0569
        (   19)   (   26)   (   25)   (   23)   (   22)   (   17)
        S=0.071   S=0.054   S=0.160   S=0.436   S=0.459   S=0.414

          OSP03     OSP06     OSP09     OSP12     OSP15     OSP18     OCT03     OCT06     OCT09     OCT12     OCT15     OCT18

CETOT   -0.1597   -0.2671   -0.1749   -0.1604   -0.1381   -0.0412    0.1397    0.0195    0.0732    0.1255    0.4204    0.0981
        (   40)   (   49)   (   45)   (   39)   (   39)   (   27)   (   44)   (   56)   (   49)   (   44)   (   42)   (   28)
        S=0.162   S=0.032   S=0.125   S=0.165   S=0.201   S=0.419   S=0.183   S=0.443   S=0.309   S=0.208   S=0.003   S=0.310

CETCH   -0.1399   -0.2308   -0.1832   -0.1649   -0.1252   -0.1219    0.1064   -0.0074    0.0771    0.0441    0.5639    0.0367
        (   40)   (   49)   (   45)   (   39)   (   39)   (   27)   (   44)   (   56)   (   49)   (   44)   (   42)   (   28)
        S=0.195   S=0.055   S=0.114   S=0.158   S=0.224   S=0.272   S=0.246   S=0.479   S=0.299   S=0.388   S=0.001   S=0.426

CEBUS   -0.0762   -0.1065    0.0290    0.1273   -0.0987    0.1573    0.2047    0.0356    0.0607   -0.1787    0.0381    0.0305
        (   40)   (   49)   (   45)   (   39)   (   39)   (   27)   (   44)   (   56)   (   49)   (   44)   (   42)   (   28)
        S=0.320   S=0.233   S=0.425   S=0.220   S=0.275   S=0.217   S=0.091   S=0.397   S=0.339   S=0.123   S=0.405   S=0.439

CEOTH   -0.1145   -0.1372   -0.1006   -0.1177   -0.0757    0.0473    0.0731    0.0783   -0.0108    0.4117   -0.0052    0.1458
        (   40)   (   49)   (   45)   (   39)   (   39)   (   27)   (   44)   (   56)   (   49)   (   44)   (   42)   (   28)
        S=0.241   S=0.174   S=0.255   S=0.238   S=0.324   S=0.407   S=0.319   S=0.283   S=0.471   S=0.003   S=0.487   S=0.230

DRIVE    0.1205   -0.1252    0.0426    0.3107   -0.1252    0.2867   -0.1549   -0.0020   -0.1259   -0.0436   -0.2979    0.4874
        (   32)   (   37)   (   32)   (   28)   (   29)   (   22)   (   35)   (   42)   (   35)   (   31)   (   32)   (   23)
        S=0.256   S=0.230   S=0.409   S=0.054   S=0.259   S=0.098   S=0.187   S=0.495   S=0.235   S=0.408   S=0.049   S=0.009

          OAC03     OAC06     OAC09     OAC12     OAC15     OAC18     OCM03     OCM06     OCM09     OCM12     OCM15     OCM18

        -0.4083    0.1545    0.2192    0.0376    0.0786   -0.0919    0.0992    0.0751   -0.1150    0.1439   -0.0812   -0.0093
        (   21)   (   33)   (   37)   (   34)   (   29)   (   21)   (   44)   (   56)   (   49)   (   44)   (   42)   (   28)
CETOT   S=0.033   S=0.195   S=0.096   S=0.416   S=0.343   S=0.346   S=0.261   S=0.291   S=0.216   S=0.176   S=0.305   S=0.481

        -0.3671   -0.0525    0.2244    0.0590    0.0310   -0.2163    0.0787    0.0810   -0.0903    0.0987   -0.1447    0.1723
        (   21)   (   33)   (   37)   (   34)   (   29)   (   21)   (   44)   (   56)   (   49)   (   44)   (   42)   (   28)
CETCH   S=0.051   S=0.386   S=0.091   S=0.370   S=0.437   S=0.173   S=0.306   S=0.277   S=0.269   S=0.262   S=0.180   S=0.190

         0.0650    0.4627    0.2991   -0.1632    0.1119   -0.0364    0.0832   -0.2212   -0.0934   -0.2344    0.0553   -0.1935
        (   21)   (   33)   (   37)   (   34)   (   29)   (   21)   (   44)   (   56)   (   49)   (   44)   (   42)   (   28)
CEBUS   S=0.390   S=0.003   S=0.036   S=0.178   S=0.282   S=0.438   S=0.296   S=0.051   S=0.262   S=0.063   S=0.364   S=0.162

        -0.3009    0.4147   -0.0444    0.0299    0.0838    0.3321    0.1091    0.1294   -0.0718    0.3158    0.0320   -0.2776
        (   21)   (   33)   (   37)   (   34)   (   29)   (   21)   (   44)   (   56)   (   49)   (   44)   (   42)   (   28)
CEOTH   S=0.093   S=0.008   S=0.397   S=0.433   S=0.333   S=0.071   S=0.240   S=0.171   S=0.312   S=0.018   S=0.420   S=0.076

         0.5151    0.3079    0.0922   -0.1481   -0.0244    0.6309    0.0931    0.1504   -0.1590   -0.4061   -0.1282   -0.4314
        (   19)   (   26)   (   25)   (   23)   (   22)   (   17)   (   35)   (   42)   (   35)   (   31)   (   32)   (   23)
DRIVE   S=0.012   S=0.063   S=0.331   S=0.250   S=0.457   S=0.003   S=0.297   S=0.171   S=0.181   S=0.012   S=0.242   S=0.020
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APPENDIX 5R

CE AND DRIVE vs. OUTCOMES

Ford - Low OCR

```
        ORC03     ORC06     ORC09     ORC12     ORC15     ORC18

CETOT   0.1900    0.9971   -0.1336   -0.1003    0.0996   -0.3793
       (     8)  (     3)  (     6)  (     6)  (     8)  (     5)
       S=0.326   S=0.024   S=0.400   S=0.425   S=0.407   S=0.264

CETCH   0.2160    0.9922   -0.1925   -0.0774    0.1361   -0.3416
       (     8)  (     3)  (     6)  (     6)  (     8)  (     5)
       S=0.304   S=0.040   S=0.357   S=0.442   S=0.374   S=0.287

CEBUS  -0.2478   -0.8442    0.2470   -0.1222   -0.0655   -0.0950
       (     8)  (     3)  (     6)  (     6)  (     8)  (     5)
       S=0.277   S=0.180   S=0.318   S=0.409   S=0.439   S=0.440

CEOTH   0.2664   99.0000   99.0000   99.0000    0.0939    0.9167
       (     8)  (     3)  (     6)  (     6)  (     8)  (     5)
       S=0.262   S=*****   S=*****   S=*****   S=0.412   S=0.014

DRIVE  -0.4436   99.0000    0.3295   -0.3814   -0.0367   -0.0233
       (     6)  (     1)  (     4)  (     4)  (     5)  (     3)
       S=0.189   S=*****   S=0.335   S=0.309   S=0.477   S=0.493


        OSP03     OSP06     OSP09     OSP12     OSP15     OSP18     OCT03     OCT06     OCT09     OCT12     OCT15     OCT18

       -0.2017   -0.3304   -0.0570   -0.1149   -0.0831   -0.1592   -0.3546    0.2082   -0.0802    0.1833   -0.3133   -0.3343
CETOT  (    10)  (    11)  (    11)  (    12)  (     9)  (     7)  (    10)  (    11)  (    12)  (    13)  (    10)  (     8)
       S=0.288   S=0.161   S=0.434   S=0.361   S=0.416   S=0.367   S=0.157   S=0.269   S=0.402   S=0.274   S=0.189   S=0.209

       -0.1783   -0.2809   -0.1470   -0.2235   -0.2278   -0.2173   -0.3727   -0.0231   -0.3738    0.2189   -0.4807   -0.5177
CETCH  (    10)  (    11)  (    11)  (    12)  (     9)  (     7)  (    10)  (    11)  (    12)  (    13)  (    10)  (     8)
       S=0.311   S=0.201   S=0.333   S=0.243   S=0.278   S=0.320   S=0.144   S=0.473   S=0.116   S=0.236   S=0.080   S=0.094

       -0.1676   -0.1165    0.0755    0.0807    0.0889    0.0529    0.3780    0.5663    0.2950    0.0275    0.0512    0.2797
CEBUS  (    10)  (    11)  (    11)  (    12)  (     9)  (     7)  (    10)  (    11)  (    12)  (    13)  (    10)  (     8)
       S=0.322   S=0.366   S=0.413   S=0.402   S=0.410   S=0.455   S=0.141   S=0.035   S=0.176   S=0.465   S=0.444   S=0.281

       -0.1432    0.5080    0.5860    0.9739    0.2757    0.9955   -0.5303    0.1077    0.0692   -0.2770   -0.4492    0.4678
CEOTH  (    10)  (    11)  (    11)  (    12)  (     9)  (     7)  (    10)  (    11)  (    12)  (    13)  (    10)  (     8)
       S=0.347   S=0.055   S=0.029   S=0.001   S=0.236   S=0.001   S=0.057   S=0.376   S=0.415   S=0.180   S=0.096   S=0.121

        0.4167    0.1510    0.0688   -0.0503   -0.0154    0.0579    0.5215    0.1001    0.0916    0.1686    0.0195    0.3733
DRIVE  (     7)  (     7)  (     7)  (     8)  (     6)  (     5)  (     7)  (     7)  (     8)  (     9)  (     7)  (     6)
       S=0.176   S=0.373   S=0.442   S=0.453   S=0.488   S=0.463   S=0.115   S=0.415   S=0.415   S=0.332   S=0.483   S=0.233

        OAC03     OAC06     OAC09     OAC12     OAC15     OAC18     OCH03     OCH06     OCH09     OCH12     OCH15     OCH18

       -0.2860   -0.3022    0.2683    0.5399    0.2273   -0.1905   -0.2257    0.3487   -0.5209    0.0228   -0.3478   -0.0364
       (     8)  (     3)  (     6)  (     6)  (     8)  (     5)  (    10)  (    11)  (    12)  (    13)  (    10)  (     8)
CETOT  S=0.246   S=0.402   S=0.304   S=0.134   S=0.294   S=0.379   S=0.265   S=0.147   S=0.041   S=0.471   S=0.162   S=0.447

       -0.3119   -0.4860    0.0014    0.5811    0.1368   -0.1446   -0.2794    0.3866   -0.2341    0.1656   -0.3018    0.1087
       (     8)  (     3)  (     6)  (     6)  (     8)  (     5)  (    10)  (    11)  (    12)  (    13)  (    10)  (     8)
CETCH  S=0.226   S=0.338   S=0.499   S=0.113   S=0.373   S=0.408   S=0.217   S=0.120   S=0.232   S=0.294   S=0.198   S=0.399

        0.0561    0.8124    0.9321    0.2027    0.4175   -0.1122    0.6159   -0.1349   -0.3922   -0.1891   -0.1767   -0.2895
       (     8)  (     3)  (     6)  (     6)  (     8)  (     5)  (    10)  (    11)  (    12)  (    13)  (    10)  (     8)
CEBUS  S=0.448   S=0.198   S=0.003   S=0.350   S=0.152   S=0.429   S=0.029   S=0.346   S=0.104   S=0.268   S=0.313   S=0.243

        0.9321   99.0000   99.0000   99.0000    0.2715    0.8975    0.0490   -0.0482    0.0692   -0.0833   -0.6548   -0.6190
       (     8)  (     3)  (     6)  (     6)  (     8)  (     5)  (    10)  (    11)  (    12)  (    13)  (    10)  (     8)
CEOTH  S=0.001   S=*****   S=*****   S=*****   S=0.258   S=0.019   S=0.447   S=0.444   S=0.415   S=0.393   S=0.020   S=0.051

        0.1175   99.0000    0.8565    0.5774    0.7583    0.0312   -0.5421    0.0      -0.1164   -0.0549   -0.0258   -0.0127
       (     6)  (     1)  (     4)  (     4)  (     5)  (     3)  (     7)  (     7)  (     8)  (     9)  (     7)  (     6)
DRIVE  S=0.412   S=*****   S=0.072   S=0.211   S=0.069   S=0.490   S=0.104   S=0.500   S=0.392   S=0.444   S=0.477   S=0.490
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APPENDIX 55

CE AND DRIVE vs. OUTCOMES

Ford - Mid OCR

	ORC03	ORC06	ORC09	ORC12	ORC15	ORC18
CETOT	0.6672 (4) S=0.166	0.5010 (9) S=0.085	0.6728 (8) S=0.034	-0.0697 (10) S=0.424	-0.0209 (14) S=0.472	-0.2416 (10) S=0.251
CETCH	0.3225 (4) S=0.339	0.4655 (9) S=0.103	0.6457 (8) S=0.042	-0.0230 (10) S=0.475	-0.0262 (14) S=0.465	-0.1948 (10) S=0.295
CEBUS	0.3801 (4) S=0.310	0.0676 (9) S=0.431	0.0488 (8) S=0.462	-0.2054 (10) S=0.285	0.0082 (14) S=0.489	-0.2833 (10) S=0.214
CEOTH	-0.9884 (4) S=0.006	0.2496 (9) S=0.259	-0.2220 (8) S=0.299	-0.3670 (10) S=0.148	0.01[illegible] (14) S=0.475	0.1971 (10) S=0.293
DRIVE	0.0904 (4) S=0.455	0.6015 (8) S=0.057	0.7906 (6) S=0.028	0.5717 (8) S=0.069	0.5321 (11) S=0.046	0.7224 (10) S=0.009

	OSP03	OSP06	OSP09	OSP12	OSP15	OSP18	OCT03	OCT06	OCT09	OCT12	OCT15	OCT18
CETOT	-0.2784 (7) S=0.273	-0.5807 (10) S=0.039	-0.4224 (11) S=0.098	-0.1258 (18) S=0.309	0.0747 (18) S=0.384	0.2602 (14) S=0.184	-0.3265 (9) S=0.196	-0.0952 (13) S=0.378	-0.0112 (12) S=0.486	-0.1269 (19) S=0.302	0.0220 (18) S=0.465	-0.0608 (14) S=0.418
CETCH	0.0371 (7) S=0.469	-0.4090 (10) S=0.120	-0.3912 (11) S=0.117	-0.1098 (18) S=0.332	0.1008 (18) S=0.345	0.1648 (14) S=0.287	-0.4152 (9) S=0.133	-0.0699 (13) S=0.410	0.0312 (12) S=0.462	-0.0862 (19) S=0.363	0.0607 (18) S=0.405	-0.0228 (14) S=0.469
CEBUS	-0.3503 (7) S=0.221	-0.2866 (10) S=0.211	-0.1374 (11) S=0.344	-0.0602 (18) S=0.406	-0.0719 (18) S=0.388	0.4242 (14) S=0.065	0.0675 (9) S=0.431	-0.0920 (13) S=0.382	-0.2816 (12) S=0.188	-0.1539 (19) S=0.265	-0.1275 (18) S=0.307	-0.1962 (14) S=0.251
CEOTH	0.0 (7) S=0.500	0.4872 (10) S=0.077	0.0446 (11) S=0.448	-0.0556 (18) S=0.413	-0.0990 (18) S=0.348	0.6736 (14) S=0.004	-0.4264 (9) S=0.126	0.4525 (13) S=0.060	-0.0394 (12) S=0.452	-0.1089 (19) S=0.329	-0.0407 (18) S=0.436	-0.0339 (14) S=0.454
DRIVE	0.6450 (6) S=0.083	-0.2665 (9) S=0.244	-0.5182 (10) S=0.062	0.0164 (16) S=0.476	-0.0527 (15) S=0.426	0.0015 (13) S=0.498	0.1896 (7) S=0.342	0.1414 (11) S=0.339	-0.0440 (10) S=0.452	-0.4741 (16) S=0.032	-0.0081 (15) S=0.489	-0.0556 (13) S=0.428

	OAC03	OAC06	OAC09	OAC12	OAC15	OAC18	OCH03	OCH06	OCH09	OCH12	OCH15	OCH18
CETOT	0.2362 (4) S=0.382	0.3400 (9) S=0.185	0.6253 (8) S=0.049	0.5195 (10) S=0.062	0.2869 (14) S=0.160	-0.1060 (10) S=0.385	0.1922 (9) S=0.310	0.3557 (13) S=0.116	0.2319 (12) S=0.234	0.1189 (19) S=0.314	-0.3327 (18) S=0.089	-0.2209 (14) S=0.224
CETCH	-0.3542 (4) S=0.323	0.0165 (9) S=0.483	0.6076 (8) S=0.055	0.4208 (10) S=0.113	0.1702 (14) S=0.280	-0.1707 (10) S=0.319	0.0326 (9) S=0.467	0.1667 (13) S=0.293	0.2733 (12) S=0.195	0.1471 (19) S=0.274	-0.2351 (18) S=0.174	-0.2918 (14) S=0.156
CEBUS	0.5628 (4) S=0.219	0.4525 (9) S=0.111	-0.0166 (8) S=0.484	0.9075 (10) S=0.001	0.3746 (14) S=0.094	0.3818 (10) S=0.138	0.2003 (9) S=0.303	0.3173 (13) S=0.145	-0.3112 (12) S=0.162	-0.2235 (19) S=0.179	-0.3639 (18) S=0.069	0.3002 (14) S=0.149
CEOTH	-0.6523 (4) S=0.174	0.7584 (9) S=0.009	0.0870 (8) S=0.419	0.5372 (10) S=0.055	0.5593 (14) S=0.019	-0.3293 (10) S=0.176	-0.5774 (9) S=0.052	0.1567 (13) S=0.305	-0.0942 (12) S=0.385	0.2871 (19) S=0.117	-0.4342 (18) S=0.036	0.1729 (14) S=0.277
DRIVE	-0.1096 (4) S=0.445	0.0966 (8) S=0.410	-0.2326 (6) S=0.329	0.1547 (8) S=0.357	-0.4295 (11) S=0.094	-0.1602 (10) S=0.329	-0.0205 (7) S=0.483	0.2402 (11) S=0.238	-0.1637 (10) S=0.326	0.3272 (16) S=0.108	0.1116 (15) S=0.346	-0.5395 (13) S=0.029

APPENDIX 5T

CE AND DRIVE vs. OUTCOMES

Ford - High OCR

	OAC03	OAC06	OAC09	OAC12	OAC15	OAC18
CETOT	-0.2142 (23) S=0.163	0.0173 (36) S=0.460	0.5447 (40) S=0.001	0.6960 (48) S=0.001	0.6562 (45) S=0.001	0.6158 (35) S=0.001
CETCH	-0.2730 (23) S=0.104	0.0222 (36) S=0.449	0.5417 (40) S=0.001	0.6701 (48) S=0.001	0.6266 (45) S=0.001	0.6153 (35) S=0.001
CEBUS	0.4701 (23) S=0.012	-0.0802 (36) S=0.321	0.1073 (40) S=0.255	0.4289 (48) S=0.001	0.3239 (45) S=0.015	0.2000 (35) S=0.125
CEOTH	0.4067 (23) S=0.027	0.5628 (36) S=0.001	0.1776 (40) S=0.136	0.3327 (48) S=0.010	0.3426 (45) S=0.011	0.3309 (35) S=0.026
DRIVE	0.2388 (21) S=0.149	0.0754 (32) S=0.341	0.0958 (35) S=0.292	0.0195 (43) S=0.451	0.0230 (41) S=0.443	0.1340 (33) S=0.229

ORC03	ORC06	ORC09	ORC12	ORC15	ORC18
0.0342 (23) S=0.439	0.4285 (36) S=0.005	0.4430 (40) S=0.002	0.5150 (48) S=0.001	0.3809 (45) S=0.005	0.4403 (35) S=0.004
0.0408 (23) S=0.427	0.3593 (36) S=0.008	0.4419 (40) S=0.002	0.5105 (48) S=0.001	0.3799 (45) S=0.005	0.4355 (35) S=0.004
-0.0533 (23) S=0.334	0.2407 (36) S=0.079	0.0543 (40) S=0.370	0.2314 (48) S=0.057	0.0663 (45) S=0.333	0.2133 (35) S=0.109
0.1922 (23) S=0.190	-0.1205 (36) S=0.242	0.2056 (40) S=0.102	0.2132 (48) S=0.073	0.2049 (45) S=0.088	0.0801 (35) S=0.324
0.1554 (21) S=0.251	-0.1951 (32) S=0.142	-0.0015 (35) S=0.497	-0.0317 (43) S=0.420	-0.0243 (41) S=0.440	0.0808 (33) S=0.327

	OSP03	OSP06	OSP09	OSP12	OSP15	OSP18
CETOT	-0.2425 (42) S=0.061	-0.1670 (47) S=0.131	-0.0956 (45) S=0.266	0.0335 (52) S=0.407	-0.0672 (46) S=0.329	-0.0871 (37) S=0.304
CETCH	-0.2347 (42) S=0.067	-0.2115 (47) S=0.077	-0.0890 (45) S=0.280	0.0361 (52) S=0.400	-0.0629 (46) S=0.339	-0.1346 (37) S=0.214
CEBUS	-0.0542 (42) S=0.367	0.4374 (47) S=0.001	-0.0735 (45) S=0.316	0.0209 (52) S=0.442	-0.0281 (46) S=0.427	0.1784 (37) S=0.145
CEOTH	-0.0498 (42) S=0.377	0.0079 (47) S=0.479	-0.0611 (45) S=0.345	-0.0714 (52) S=0.307	-0.0538 (46) S=0.361	0.0210 (37) S=0.451
DRIVE	-0.0130 (34) S=0.471	0.1607 (38) S=0.159	0.2028 (35) S=0.121	0.2554 (41) S=0.054	0.2160 (37) S=0.100	0.2025 (31) S=0.137

OCR	OCR	OCR	OCR	OCR	OCR
99.0000 (0) S=******	99.0000 (0) S=******	99.0000 (0) S=******	99.0000 (0) S=******	99.0000 (0) S=******	99.0000 (0) S=******
99.0000 (0) S=******	99.0000 (0) S=******	99.0000 (0) S=******	99.0000 (0) S=******	99.0000 (0) S=******	99.0000 (0) S=******
99.0000 (0) S=******	99.0000 (0) S=******	99.0000 (0) S=******	99.0000 (0) S=******	99.0000 (0) S=******	99.0000 (0) S=******
99.0000 (0) S=******	99.0000 (0) S=******	99.0000 (0) S=******	99.0000 (0) S=******	99.0000 (0) S=******	99.0000 (0) S=******
99.0000 (0) S=******	99.0000 (0) S=******	99.0000 (0) S=******	99.0000 (0) S=******	99.0000 (0) S=******	99.0000 (0) S=******

	OCM03	OCM06	OCM09	OCM12	OCM15	OCM18
CETOT	0.1575 (41) S=0.163	-0.1778 (49) S=0.111	0.1053 (47) S=0.241	-0.1241 (55) S=0.183	0.0282 (47) S=0.425	-0.2299 (38) S=0.083
CETCH	0.1700 (41) S=0.144	-0.1717 (49) S=0.119	0.1242 (47) S=0.203	-0.1059 (55) S=0.221	0.1107 (47) S=0.229	-0.1523 (38) S=0.181
CEBUS	-0.0924 (41) S=0.283	-0.0639 (49) S=0.331	-0.1890 (47) S=0.102	-0.2421 (55) S=0.037	-0.3848 (47) S=0.004	-0.4073 (38) S=0.006
CEOTH	0.0790 (41) S=0.312	-0.0307 (49) S=0.417	-0.0110 (47) S=0.471	0.1641 (55) S=0.116	-0.1423 (47) S=0.170	-0.1879 (38) S=0.129
DRIVE	0.1247 (31) S=0.252	0.0616 (38) S=0.358	0.1172 (35) S=0.251	-0.1358 (42) S=0.196	-0.0066 (38) S=0.484	-0.0336 (32) S=0.429

OCT03	OCT06	OCT09	OCT12	OCT15	OCT18
-0.2119 (42) S=0.089	-0.2536 (50) S=0.038	-0.1510 (48) S=0.153	-0.0648 (56) S=0.317	-0.0639 (48) S=0.333	0.0794 (38) S=0.318
-0.1996 (42) S=0.103	-0.2405 (50) S=0.046	-0.1445 (48) S=0.164	-0.0818 (56) S=0.274	-0.0698 (48) S=0.319	0.1061 (38) S=0.263
-0.0676 (42) S=0.335	-0.1310 (50) S=0.182	-0.1293 (48) S=0.190	0.0021 (56) S=0.494	0.0247 (48) S=0.434	-0.0368 (38) S=0.413
-0.2641 (42) S=0.045	-0.1436 (50) S=0.160	0.0511 (48) S=0.365	0.2412 (56) S=0.037	-0.0424 (48) S=0.387	-0.1771 (38) S=0.144
-0.0988 (32) S=0.295	-0.0336 (39) S=0.420	0.1[illegible]30 (36) S=0.203	0.0701 (43) S=0.328	0.0360 (39) S=0.414	-0.0188 (32) S=0.459

CE AND DRIVE vs. OUTCOMES

NASA - All People

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        OAC03     OAC06     OAC09     OAC12     OAC15     OAC18         ORC03     ORC06     ORC09     ORC12     ORC15     ORC18

CETOT   -0.1471   -0.1593    0.4736    0.6239    0.5756    0.7395       -0.0426    0.3415    0.4887    0.4452    0.3413    0.5962
        (    20)  (    28)  (    29)  (    32)  (    24)  (    14)      (    20)  (    28)  (    29)  (    32)  (    24)  (    14)
        S=0.268   S=0.209   S=0.005   S=0.001   S=0.002   S=0.001       S=0.429   S=0.038   S=0.004   S=0.005   S=0.051   S=0.012

CETCH   -0.2154   -0.1446    0.4718    0.5964    0.5075    0.6706       -0.0315    0.3136    0.4938    0.4424    0.3246    0.5867
        (    20)  (    28)  (    29)  (    32)  (    24)  (    14)      (    20)  (    28)  (    29)  (    32)  (    24)  (    14)
        S=0.181   S=0.231   S=0.005   S=0.001   S=0.006   S=0.004       S=0.447   S=0.052   S=0.003   S=0.006   S=0.061   S=0.014

CEBUS    0.5261   -0.1343    0.0480    0.3564    0.4606    0.6892       -0.1199    0.1863   -0.0503    0.1645    0.0821    0.4239
        (    20)  (    28)  (    29)  (    32)  (    24)  (    14)      (    20)  (    28)  (    29)  (    32)  (    24)  (    14)
        S=0.009   S=0.248   S=0.402   S=0.023   S=0.012   S=0.003       S=0.307   S=0.171   S=0.398   S=0.184   S=0.351   S=0.065

CEOTH    0.4677    0.5778    0.1273    0.2722    0.3590    0.3592        0.1724   -0.1561    0.2266    0.1592    0.2528   -0.0495
        (    20)  (    28)  (    29)  (    32)  (    24)  (    14)      (    20)  (    28)  (    29)  (    32)  (    24)  (    14)
        S=0.019   S=0.001   S=0.255   S=0.066   S=0.042   S=0.104       S=0.234   S=0.214   S=0.119   S=0.192   S=0.117   S=0.433

DRIVE    0.1913    0.1477    0.1227   -0.1290   -0.2134   -0.0850        0.2286   -0.1814   -0.0056   -0.1190   -0.3287   -0.0984
        (    18)  (    25)  (    26)  (    29)  (    22)  (    14)      (    18)  (    25)  (    26)  (    29)  (    22)  (    14)
        S=0.224   S=0.241   S=0.275   S=0.252   S=0.170   S=0.386       S=0.181   S=0.193   S=0.489   S=0.269   S=0.068   S=0.369


        OSP03     OSP06     OSP09     OSP12     OSP15     OSP18         OCR       OCR       OCR       OCR       OCR       OCR

CETOT   -0.2363   -0.1511   -0.0293    0.3178   -0.2867   -0.1367       99.0000   99.0000   99.0000   99.0000   99.0000   99.0000
        (    34)  (    36)  (    32)  (    33)  (    26)  (    16)      (     0)  (     0)  (     0)  (     0)  (     0)  (     0)
        S=0.089   S=0.190   S=0.437   S=0.036   S=0.078   S=0.307       S=******  S=******  S=******  S=******  S=******  S=******

CETCH   -0.2270   -0.2608   -0.0196    0.3000   -0.3515   -0.2029       99.0000   99.0000   99.0000   99.0000   99.0000   99.0000
        (    34)  (    36)  (    32)  (    33)  (    26)  (    16)      (     0)  (     0)  (     0)  (     0)  (     0)  (     0)
        S=0.098   S=0.120   S=0.458   S=0.045   S=0.039   S=0.226       S=******  S=******  S=******  S=******  S=******  S=******

CEBUS   -0.0511    0.4663   -0.0644    0.2617    0.3087    0.3521       99.0000   99.0000   99.0000   99.0000   99.0000   99.0000
        (    34)  (    36)  (    32)  (    33)  (    26)  (    16)      (     0)  (     0)  (     0)  (     0)  (     0)  (     0)
        S=0.387   S=0.002   S=0.363   S=0.056   S=0.062   S=0.091       S=******  S=******  S=******  S=******  S=******  S=******

CEOTH   -0.0474    0.0170   -0.1110   -0.1136   -0.1636   -0.0398       99.0000   99.0000   99.0000   99.0000   99.0000   99.0000
        (    34)  (    36)  (    32)  (    33)  (    26)  (    16)      (     0)  (     0)  (     0)  (     0)  (     0)  (     0)
        S=0.395   S=0.461   S=0.273   S=0.264   S=0.212   S=0.442       S=******  S=******  S=******  S=******  S=******  S=******

DRIVE    0.0152    0.2097    0.2665    0.3153    0.4160    0.4060       99.0000   99.0000   99.0000   99.0000   99.0000   99.0000
        (    28)  (    31)  (    27)  (    28)  (    22)  (    15)      (     0)  (     0)  (     0)  (     0)  (     0)  (     0)
        S=0.469   S=0.129   S=0.090   S=0.051   S=0.027   S=0.067       S=******  S=******  S=******  S=******  S=******  S=******


        OCM03     OCM06     OCM09     OCM12     OCM15     OCM18         OCT03     OCT06     OCT09     OCT12     OCT15     OCT18

CETOT    0.1360   -0.2643   -0.0209   -0.2961    0.1395   -0.2931       -0.2239   -0.2404   -0.0855   -0.0607    0.0751    0.1793
        (    33)  (    37)  (    33)  (    35)  (    26)  (    16)      (    34)  (    38)  (    34)  (    36)  (    27)  (    16)
        S=0.225   S=0.057   S=0.454   S=0.042   S=0.248   S=0.135       S=0.102   S=0.073   S=0.315   S=0.363   S=0.355   S=0.253

CETCH    0.1527   -0.2505    0.0111   -0.2702    0.2546   -0.2347       -0.2105   -0.2272   -0.0832   -0.0817    0.0301    0.2154
        (    33)  (    37)  (    33)  (    35)  (    26)  (    16)      (    34)  (    38)  (    34)  (    36)  (    27)  (    16)
        S=0.198   S=0.067   S=0.475   S=0.058   S=0.105   S=0.191       S=0.116   S=0.085   S=0.320   S=0.318   S=0.441   S=0.211

CEBUS    0.1221   -0.1061   -0.3120   -0.3535   -0.4704   -0.4121       -0.0617   -0.1003   -0.0744   -0.0193    0.2426   -0.0569
        (    33)  (    37)  (    33)  (    35)  (    26)  (    16)      (    34)  (    38)  (    34)  (    36)  (    27)  (    16)
        S=0.249   S=0.266   S=0.039   S=0.019   S=0.008   S=0.056       S=0.364   S=0.275   S=0.338   S=0.456   S=0.111   S=0.417

CEOTH    0.0795   -0.0364   -0.0766    0.1966   -0.1662   -0.3566       -0.2649   -0.1551    0.1056    0.3697    0.0238   -0.1096
        (    33)  (    37)  (    33)  (    35)  (    26)  (    16)      (    34)  (    38)  (    34)  (    36)  (    27)  (    16)
        S=0.330   S=0.415   S=0.336   S=0.129   S=0.209   S=0.088       S=0.065   S=0.176   S=0.276   S=0.013   S=0.453   S=0.343

DRIVE    0.2507    0.0157    0.1098    0.0167    0.0589    0.0194       -0.1262   -0.0461    0.0981    0.0462    0.0498    0.0635
        (    25)  (    33)  (    26)  (    28)  (    22)  (    15)      (    26)  (    31)  (    27)  (    29)  (    23)  (    15)
        S=0.104   S=0.467   S=0.297   S=0.466   S=0.397   S=0.473       S=0.279   S=0.403   S=0.313   S=0.406   S=0.411   S=0.411
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APPENDIX 6B

CE AND DRIVE vs. OUTCOMES

NASA - Masters

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          OAC03     OAC06     OAC09     OAC12     OAC15     OAC18

CETOT   -0.0429    0.4842    0.2630    0.5523    0.4535    0.3881
       (     3)  (     8)  (    11)  (    16)  (    21)  (    21)
       S=0.486   S=0.112   S=0.217   S=0.013   S=0.019   S=0.041

CETCH   -0.0429    0.5241    0.2757    0.4696    0.5204    0.4929
       (     3)  (     8)  (    11)  (    16)  (    21)  (    21)
       S=0.486   S=0.091   S=0.206   S=0.033   S=0.008   S=0.012

CEBUS   99.0000   -0.0133    0.0463    0.7272    0.0533   -0.0516
       (     3)  (     8)  (    11)  (    16)  (    21)  (    21)
       S=******  S=0.488   S=0.446   S=0.001   S=0.409   S=0.412

CEOTH   99.0000   99.0000   99.0000   99.0000   99.0000   99.0000
       (     3)  (     8)  (    11)  (    16)  (    21)  (    21)
       S=******  S=******  S=******  S=******  S=******  S=******

DRIVE    0.9308    0.5221    0.3252    0.3784    0.1933    0.2035
       (     3)  (     7)  (     9)  (    14)  (    19)  (    19)
       S=0.119   S=0.115   S=0.197   S=0.091   S=0.214   S=0.202


          OSP03     OSP06     OSP09     OSP12     OSP15     OSP18

CETOT   -0.3354    0.0317    0.1826    0.1402    0.1139   -0.1468
       (     8)  (    11)  (    13)  (    19)  (    20)  (    21)
       S=0.208   S=0.463   S=0.275   S=0.283   S=0.316   S=0.263

CETCH   -0.3354    0.0123    0.2026    0.1647    0.1516   -0.1852
       (     8)  (    11)  (    13)  (    19)  (    20)  (    21)
       S=0.208   S=0.486   S=0.253   S=0.250   S=0.262   S=0.211

CEBUS   99.0000    0.2372   -0.1044   -0.0810   -0.1144    0.0613
       (     8)  (    11)  (    13)  (    19)  (    20)  (    21)
       S=******  S=0.241   S=0.367   S=0.371   S=0.316   S=0.396

CEOTH   99.0000   99.0000   99.0000   99.0000   99.0000   99.0000
       (     8)  (    11)  (    13)  (    19)  (    20)  (    21)
       S=******  S=******  S=******  S=******  S=******  S=******

DRIVE   -0.7476   -0.4748    0.4306    0.3632    0.3063   -0.1001
       (     6)  (     7)  (     8)  (    13)  (    15)  (    16)
       S=0.044   S=0.141   S=0.143   S=0.111   S=0.133   S=0.356


          OCM03     OCM06     OCM09     OCM12     OCM15     OCM18

CETOT    0.1854    0.1352    0.1884    0.1565    0.2107   -0.2299
       (     8)  (    12)  (    14)  (    20)  (    21)  (    22)
       S=0.330   S=0.338   S=0.259   S=0.255   S=0.180   S=0.152

CETCH    0.1854    0.1288    0.1844    0.1810    0.3002   -0.1076
       (     8)  (    12)  (    14)  (    20)  (    21)  (    22)
       S=0.330   S=0.345   S=0.264   S=0.223   S=0.093   S=0.317

CEBUS   99.0000    0.1834    0.1754   -0.0730   -0.2975   -0.4129
       (     8)  (    12)  (    14)  (    20)  (    21)  (    22)
       S=******  S=0.284   S=0.274   S=0.380   S=0.095   S=0.028

CEOTH   99.0000   99.0000   99.0000   99.0000   99.0000   99.0000
       (     8)  (    12)  (    14)  (    20)  (    21)  (    22)
       S=******  S=******  S=******  S=******  S=******  S=******

DRIVE   -0.3558    0.1927    0.1493   -0.3444   -0.0018   -0.0533
       (     6)  (     8)  (     9)  (    14)  (    16)  (    17)
       S=0.244   S=0.324   S=0.351   S=0.114   S=0.497   S=0.419
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   ORC03     ORC06     ORC09     ORC12     ORC15     ORC18

  0.4643    0.7295    0.1471    0.4174    0.2642    0.2255
(     3)  (     8)  (    11)  (    16)  (    21)  (    21)
S=0.346   S=0.020   S=0.333   S=0.054   S=0.124   S=0.163

  0.4643    0.7120    0.1295    0.4120    0.3142    0.2189
(     3)  (     8)  (    11)  (    16)  (    21)  (    21)
S=0.346   S=0.024   S=0.352   S=0.056   S=0.083   S=0.170

 99.0000    0.7875    0.2504    0.2727   -0.0056    0.1405
(     3)  (     8)  (    11)  (    16)  (    21)  (    21)
S=******  S=0.010   S=0.193   S=0.153   S=0.483   S=0.272

 99.0000   99.0000   99.0000   99.0000   99.0000   99.0000
(     3)  (     8)  (    11)  (    16)  (    21)  (    21)
S=******  S=******  S=******  S=******  S=******  S=******

 -0.5867    0.1150    0.1069    0.0301    0.1174    0.1047
(     3)  (     7)  (     9)  (    14)  (    19)  (    19)
S=0.259   S=0.432   S=0.392   S=0.459   S=0.316   S=0.335


     OCR       OCR       OCR       OCR       OCR       OCR

 99.0000   99.0000   99.0000   99.0000   99.0000   99.0000
(     0)  (     0)  (     0)  (     0)  (     0)  (     0)
S=******  S=******  S=******  S=******  S=******  S=******

 99.0000   99.0000   99.0000   99.0000   99.0000   99.0000
(     0)  (     0)  (     0)  (     0)  (     0)  (     0)
S=******  S=******  S=******  S=******  S=******  S=******

 99.0000   99.0000   99.0000   99.0000   99.0000   99.0000
(     0)  (     0)  (     0)  (     0)  (     0)  (     0)
S=******  S=******  S=******  S=******  S=******  S=******

 99.0000   99.0000   99.0000   99.0000   99.0000   99.0000
(     0)  (     0)  (     0)  (     0)  (     0)  (     0)
S=******  S=******  S=******  S=******  S=******  S=******

 99.0000   99.0000   99.0000   99.0000   99.0000   99.0000
(     0)  (     0)  (     0)  (     0)  (     0)  (     0)
S=******  S=******  S=******  S=******  S=******  S=******


   OCT03     OCT06     OCT09     OCT12     OCT15     OCT18

  0.3547   -0.2720   -0.2061    0.3411    0.1318    0.2941
(     8)  (    12)  (    14)  (    20)  (    21)  (    22)
S=0.194   S=0.196   S=0.240   S=0.071   S=0.284   S=0.092

  0.3547   -0.2586   -0.1831    0.3138    0.2156    0.3616
(     8)  (    12)  (    14)  (    20)  (    21)  (    22)
S=0.194   S=0.209   S=0.265   S=0.089   S=0.174   S=0.049

 99.0000   -0.3730   -0.4046    0.3227   -0.3072   -0.0947
(     8)  (    12)  (    14)  (    20)  (    21)  (    22)
S=******  S=0.116   S=0.076   S=0.083   S=0.088   S=0.338

 99.0000   99.0000   99.0000   99.0000   99.0000   99.0000
(     8)  (    12)  (    14)  (    20)  (    21)  (    22)
S=******  S=******  S=******  S=******  S=******  S=******

  0.2122    0.2028    0.2755    0.1382    0.0894   -0.0017
(     6)  (     8)  (     9)  (    14)  (    16)  (    17)
S=0.343   S=0.315   S=0.236   S=0.319   S=0.371   S=0.497
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CE AND DRIVE vs. OUTCOMES

NASA - No Masters

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        OAC03    OAC06    OAC09    OAC12    OAC15    OAC18          ORC03    ORC06    ORC09    ORC12    ORC15    ORC18

CETOT   0.1565  -0.4735   0.2855   0.3317   0.1223   0.9742          0.1068   0.6384   0.7429   0.5284   0.1092   0.9997
       (     7) (    10) (     9) (     8) (     6) (     3)        (     7) (    10) (     9) (     8) (     6) (     3)
       S=0.369  S=0.083  S=0.228  S=0.211  S=0.409  S=0.072        S=0.410  S=0.023  S=0.011  S=0.089  S=0.418  S=0.008

CETCH  -0.1454  -0.4407   0.2761   0.2753   0.0841   0.9883          0.2366   0.6597   0.7630   0.5433   0.1381   0.9988
       (     7) (    10) (     9) (     8) (     6) (     3)        (     7) (    10) (     9) (     8) (     6) (     3)
       S=0.378  S=0.101  S=0.236  S=0.255  S=0.437  S=0.049        S=0.305  S=0.019  S=0.008  S=0.082  S=0.397  S=0.016

CEBUS   0.6258  -0.1362  -0.0787   0.0159   0.3257   0.9325         -0.2607  -0.4717  -0.4788  -0.6673  -0.4325   0.9861
       (     7) (    10) (     9) (     8) (     6) (     3)        (     7) (    10) (     9) (     8) (     6) (     3)
       S=0.065  S=0.354  S=0.420  S=0.485  S=0.264  S=0.118        S=0.286  S=0.084  S=0.096  S=0.035  S=0.196  S=0.053

CEOTH   0.4367   0.6810   0.3618   0.6347   0.1168   0.8175          0.1100  -0.3181   0.2493   0.3601   0.7844   0.9167
       (     7) (    10) (     9) (     8) (     6) (     3)        (     7) (    10) (     9) (     8) (     6) (     3)
       S=0.164  S=0.015  S=0.169  S=0.045  S=0.413  S=0.195        S=0.407  S=0.185  S=0.259  S=0.190  S=0.032  S=0.131

DRIVE  -0.0731   0.1859   0.5324   0.3729   0.1103  -0.2597          0.5085  -0.0989   0.1105  -0.1310  -0.2971  -0.0598
       (     5) (     8) (     7) (     6) (     5) (     3)        (     5) (     8) (     7) (     6) (     5) (     3)
       S=0.454  S=0.330  S=0.139  S=0.233  S=0.430  S=0.416        S=0.191  S=0.408  S=0.407  S=0.402  S=0.314  S=0.481


        OSP03    OSP06    OSP09    OSP12    OSP15    OSP18          OCR      OCR      OCR      OCR      OCR      OCR

CETOT  -0.2668  -0.1819  -0.0060   0.1749  -0.3277   0.4424         99.0000  99.0000  99.0000  99.0000  99.0000  99.0000
       (    13) (    12) (     9) (     8) (     6) (     3)        (     0) (     0) (     0) (     0) (     0) (     0)
       S=0.189  S=0.286  S=0.494  S=0.339  S=0.256  S=0.354        S=*****  S=*****  S=*****  S=*****  S=*****  S=*****

CETCH  -0.2598  -0.2710  -0.0319   0.1287  -0.3653   0.3524         99.0000  99.0000  99.0000  99.0000  99.0000  99.0000
       (    13) (    12) (     9) (     8) (     6) (     3)        (     0) (     0) (     0) (     0) (     0) (     0)
       S=0.196  S=0.197  S=0.468  S=0.381  S=0.238  S=0.385        S=*****  S=*****  S=*****  S=*****  S=*****  S=*****

CEBUS  -0.0236   0.9091   0.3272   0.8019   0.2052   0.7194         99.0000  99.0000  99.0000  99.0000  99.0000  99.0000
       (    13) (    12) (     9) (     8) (     6) (     3)        (     0) (     0) (     0) (     0) (     0) (     0)
       S=0.469  S=0.001  S=0.195  S=0.008  S=0.348  S=0.244        S=*****  S=*****  S=*****  S=*****  S=*****  S=*****

CEOTH  -0.0895  -0.0310   0.0193  -0.2968  -0.3156   0.6660         99.0000  99.0000  99.0000  99.0000  99.0000  99.0000
       (    13) (    12) (     9) (     8) (     6) (     3)        (     0) (     0) (     0) (     0) (     0) (     0)
       S=0.386  S=0.462  S=0.480  S=0.238  S=0.271  S=0.167        S=*****  S=*****  S=*****  S=*****  S=*****  S=*****

DRIVE   0.2990   0.3250   0.2736   0.6799   0.3777   0.8660         99.0000  99.0000  99.0000  99.0000  99.0000  99.0000
       (    10) (    10) (     7) (     6) (     5) (     3)        (     0) (     0) (     0) (     0) (     0) (     0)
       S=0.201  S=0.180  S=0.276  S=0.069  S=0.265  S=0.167        S=*****  S=*****  S=*****  S=*****  S=*****  S=*****


        OCM03    OCM06    OCM09    OCM12    OCM15    OCM18          OCT03    OCT06    OCT09    OCT12    OCT15    OCT18

CETOT  -0.0314  -0.3424  -0.1175  -0.4875   0.6054   0.0652         -0.4209  -0.5181  -0.3000  -0.3656  -0.1008  -0.0652
       (    11) (    10) (     7) (     7) (     5) (     3)        (    12) (    11) (     8) (     8) (     6) (     3)
       S=0.404  S=0.166  S=0.401  S=0.134  S=0.140  S=0.479        S=0.087  S=0.051  S=0.235  S=0.187  S=0.425  S=0.479

CETCH  -0.0638  -0.3504  -0.0610  -0.4906   0.7064   0.1628         -0.4437  -0.5193  -0.3261  -0.4380  -0.1655  -0.1628
       (    11) (    10) (     7) (     7) (     5) (     3)        (    12) (    11) (     8) (     8) (     6) (     3)
       S=0.420  S=0.160  S=0.448  S=0.132  S=0.091  S=0.448        S=0.074  S=0.051  S=0.215  S=0.139  S=0.377  S=0.448

CEBUS   0.2122   0.2223  -0.3373  -0.1373  -0.5833  -0.2757          0.2346   0.2129   0.2642   0.3159   0.6325   0.2757
       (    11) (    10) (     7) (     7) (     5) (     3)        (    12) (    11) (     8) (     8) (     6) (     3)
       S=0.266  S=0.269  S=0.230  S=0.385  S=0.151  S=0.411        S=0.231  S=0.265  S=0.264  S=0.223  S=0.089  S=0.411

CEOTH   0.1200  -0.0995  -0.8062   0.4613   0.6667  -0.5000         -0.3430  -0.2170   0.2903   0.8171  -0.3162   0.5000
       (    11) (    10) (     7) (     7) (     5) (     3)        (    12) (    11) (     8) (     8) (     6) (     3)
       S=0.363  S=0.392  S=0.014  S=0.149  S=0.110  S=0.333        S=0.138  S=0.261  S=0.243  S=0.007  S=0.271  S=0.333

DRIVE  -0.5583  -0.4224  -0.5371  -0.5371  -0.4857  -1.0000         -0.1148  -0.0717   0.3095   0.5840   0.6592   1.0000
       (     9) (     8) (     5) (     5) (     4) (     3)        (     9) (     9) (     5) (     6) (     5) (     3)
       S=0.075  S=0.149  S=0.175  S=0.175  S=0.257  S=0.001        S=0.384  S=0.427  S=0.275  S=0.112  S=0.113  S=0.001
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CE AND DRIVE vs. OUTCOMES

NASA - Doctorate

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         OAC03    OAC06    OAC09    OAC12    OAC15    OAC18          ORC03    ORC06    ORC09    ORC12    OAC15    ORC18

CETOT  -0.1914   0.1658   0.5805   0.7190   0.6546   0.5573         0.0351   0.5043   0.2903   0.4929   0.4188   0.3709
       (    20)  (    26) (    26) (    33) (    26) (    19)        (    20) (    26) (    26) (    33) (    26) (    19)
       S=0.209  S=0.209  S=0.001  S=0.001  S=0.001  S=0.007        S=0.442  S=0.004  S=0.075  S=0.002  S=0.017  S=0.059

CETCH  -0.2526   0.1742   0.5779   0.6949   0.6014   0.5512         0.0383   0.4297   0.2657   0.4652   0.3870   0.3341
       (    20)  (    26) (    26) (    33) (    26) (    19)        (    20) (    26) (    26) (    33) (    26) (    19)
       S=0.141  S=0.197  S=0.001  S=0.001  S=0.001  S=0.007        S=0.436  S=0.014  S=0.095  S=0.003  S=0.025  S=0.081

CEBUS   0.4826  -0.1211   0.1600   0.4808   0.3579   0.2414        -0.0725   0.6659   0.2643   0.4048   0.2182   0.3197
       (    20)  (    26) (    26) (    33) (    26) (    19)        (    20) (    26) (    26) (    33) (    26) (    19)
       S=0.016  S=0.278  S=0.217  S=0.002  S=0.036  S=0.160        S=0.381  S=0.001  S=0.096  S=0.010  S=0.142  S=0.091

CEOTH   0.4211   0.6685   0.0876   0.2849   0.4210   0.1683         0.2539  -0.1352   0.2398   0.1592   0.2627  -0.0445
       (    20)  (    26) (    26) (    33) (    26) (    19)        (    20) (    26) (    26) (    33) (    26) (    19)
       S=0.032  S=0.001  S=0.335  S=0.054  S=0.016  S=0.245        S=0.140  S=0.255  S=0.119  S=0.188  S=0.097  S=0.428

DRIVE   0.3181   0.0960  -0.1049  -0.1656  -0.1579  -0.0872         0.1228  -0.3820  -0.1767  -0.0750  -0.3761  -0.1642
       (    18)  (    23) (    22) (    29) (    23) (    18)        (    18) (    23) (    22) (    29) (    23) (    18)
       S=0.399  S=0.332  S=0.321  S=0.195  S=0.236  S=0.365        S=0.314  S=0.036  S=0.216  S=0.350  S=0.038  S=0.258


         OSP03    OSP06    OSP09    OSP12    OSP15    OSP18          OCR      OCR      OCR      OCR      OCR      OCR

CETOT  -0.2265  -0.2160  -0.1099   0.0544  -0.0450  -0.0176        99.0000  99.0000  99.0000  99.0000  99.0000  99.0000
       (    32)  (    33) (    31) (    36) (    27) (    21)        (     0) (     0) (     0) (     0) (     0) (     0)
       S=0.106  S=0.114  S=0.278  S=0.376  S=0.412  S=0.470        S=*****  S=*****  S=*****  S=*****  S=*****  S=*****

CETCH  -0.2193  -0.2115  -0.1010   0.0634  -0.0327  -0.1082        99.0000  99.0000  99.0000  99.0000  99.0000  99.0000
       (    32)  (    33) (    31) (    36) (    27) (    21)        (     0) (     0) (     0) (     0) (     0) (     0)
       S=0.114  S=0.119  S=0.294  S=0.357  S=0.436  S=0.320        S=*****  S=*****  S=*****  S=*****  S=*****  S=*****

CEBUS  -0.0432  -0.0632  -0.0934   0.0016  -0.0429   0.3660        99.0000  99.0000  99.0000  99.0000  99.0000  99.0000
       (    32)  (    33) (    31) (    36) (    27) (    21)        (     0) (     0) (     0) (     0) (     0) (     0)
       S=0.407  S=0.363  S=0.309  S=0.496  S=0.416  S=0.051        S=*****  S=*****  S=*****  S=*****  S=*****  S=*****

CEOTH  -0.0479   0.0613  -0.0754  -0.0650  -0.0685  -0.1136        99.0000  99.0000  99.0000  99.0000  99.0000  99.0000
       (    32)  (    33) (    31) (    36) (    27) (    21)        (     0) (     0) (     0) (     0) (     0) (     0)
       S=0.397  S=0.367  S=0.336  S=0.311  S=0.367  S=0.312        S=*****  S=*****  S=*****  S=*****  S=*****  S=*****

DRIVE  -0.1531  -0.0090   0.2547   0.3027   0.2476   0.1702        99.0000  99.0000  99.0000  99.0000  99.0000  99.0000
       (    24)  (    25) (    22) (    27) (    20) (    17)        (     0) (     0) (     0) (     0) (     0) (     0)
       S=0.238  S=0.483  S=0.126  S=0.062  S=0.146  S=0.257        S=*****  S=*****  S=*****  S=*****  S=*****  S=*****


         OCM03    OCM06    OCM09    OCM12    OCM15    OCM18          OCT03    OCT06    OCT09    OCT12    OCT15    OCT18

CETOT   0.1725  -0.1609   0.2343  -0.0907   0.1598  -0.3254        -0.0131  -0.1263  -0.1368  -0.0554  -0.1077   0.0543
       (    34)  (    37) (    35) (    40) (    29) (    22)        (    34) (    37) (    35) (    40) (    29) (    22)
       S=0.165  S=0.171  S=0.088  S=0.289  S=0.204  S=0.070        S=0.471  S=0.228  S=0.217  S=0.367  S=0.289  S=0.405

CETCH   0.1892  -0.1495   0.2470  -0.0757   0.2658  -0.2794         0.0017  -0.1154  -0.1307  -0.0942  -0.1625   0.0585
       (    34)  (    37) (    35) (    40) (    29) (    22)        (    34) (    37) (    35) (    40) (    29) (    22)
       S=0.142  S=0.189  S=0.076  S=0.321  S=0.082  S=0.104        S=0.496  S=0.248  S=0.227  S=0.282  S=0.200  S=0.398

CEBUS  -0.1060  -0.1278  -0.1472  -0.2253  -0.3217  -0.2856        -0.0619  -0.1103  -0.1433   0.0674   0.2009   0.0007
       (    34)  (    37) (    35) (    40) (    29) (    22)        (    34) (    37) (    35) (    40) (    29) (    22)
       S=0.275  S=0.226  S=0.199  S=0.081  S=0.044  S=0.099        S=0.364  S=0.258  S=0.206  S=0.340  S=0.148  S=0.499

CEOTH   0.0872  -0.0286   0.1928   0.2543  -0.2296   0.1258        -0.2931  -0.1580   0.1168   0.4238   0.0101  -0.0120
       (    34)  (    37) (    35) (    40) (    29) (    22)        (    34) (    37) (    35) (    40) (    29) (    22)
       S=0.312  S=0.433  S=0.134  S=0.057  S=0.115  S=0.288        S=0.046  S=0.175  S=0.252  S=0.003  S=0.479  S=0.479

DRIVE   0.2693   0.2223   0.1922  -0.0506  -0.0094  -0.1005         0.0329   0.0585   0.3207   0.2568   0.1674   0.2934
       (    24)  (    27) (    24) (    29) (    22) (    18)        (    24) (    27) (    24) (    29) (    22) (    18)
       S=0.102  S=0.133  S=0.184  S=0.397  S=0.483  S=0.346        S=0.439  S=0.356  S=0.063  S=0.088  S=0.228  S=0.119
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CE AND DRIVE vs. OUTCOMES

NASA - Low Schools

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       OAC03    OAC06    OAC09    OAC12    OAC15    OAC18          ORC03    ORC06    ORC09    ORC12    ORC15    ORC18

CETOT -0.9604  -0.4229   0.5059   0.6757   0.6789   0.6874          0.8466   0.2616   0.6354   0.5627   0.3315   0.4579
      (     3) (    10) (    14) (    15) (    19) (    16)        (     3) (    10) (    14) (    15) (    19) (    16)
      S=0.090  S=0.112  S=0.031  S=0.003  S=0.001  S=0.002         S=0.179  S=0.233  S=0.007  S=0.014  S=0.083  S=0.037

CETCH -0.9604  -0.4064   0.5088   0.6667   0.6810   0.6899          0.8466   0.3108   0.6590   0.5879   0.3606   0.4714
      (     3) (    10) (    14) (    15) (    19) (    16)        (     3) (    10) (    14) (    15) (    19) (    16)
      S=0.090  S=0.122  S=0.032  S=0.003  S=0.001  S=0.002         S=0.179  S=0.191  S=0.005  S=0.011  S=0.065  S=0.033

CEBUS 99.0000  -0.0257  -0.0234   0.1425   0.2816   0.1719         99.0000  -0.5114  -0.2621  -0.2967  -0.1557   0.1447
      (     3) (    10) (    14) (    15) (    19) (    16)        (     3) (    10) (    14) (    15) (    19) (    16)
      S=*****  S=0.472  S=0.468  S=0.306  S=0.121  S=0.262         S=*****  S=0.065  S=0.183  S=0.141  S=0.262  S=0.296

CEOTH 99.0000  99.0000   0.3329   0.5166   0.2445   0.4536         99.0000  99.0000   0.1676   0.4377   0.3165   0.0574
      (     3) (    10) (    14) (    15) (    19) (    16)        (     3) (    10) (    14) (    15) (    19) (    16)
      S=*****  S=*****  S=0.122  S=0.024  S=0.156  S=0.039         S=*****  S=*****  S=0.283  S=0.051  S=0.093  S=0.416

DRIVE -0.9883   0.0019   0.4908   0.4366   0.2050   0.3360          0.9081   0.1754   0.2398   0.0919   0.3869   0.3501
      (     3) (     9) (    13) (    14) (    18) (    15)        (     3) (     9) (    13) (    14) (    18) (    15)
      S=0.049  S=0.498  S=0.044  S=0.059  S=0.207  S=0.110         S=0.137  S=0.326  S=0.215  S=0.377  S=0.056  S=0.100


       OSP03    OSP06    OSP09    OSP12    OSP15    OSP18          OCR      OCR      OCR      OCR      OCR      OCR

CETOT -0.3618  -0.2076  -0.2253  -0.2481  -0.3752  -0.1890         99.0000  99.0000  99.0000  99.0000  99.0000  99.0000
      (    10) (    14) (    14) (    16) (    19) (    16)        (     0) (     0) (     0) (     0) (     0) (     0)
      S=0.152  S=0.238  S=0.219  S=0.177  S=0.057  S=0.242         S=*****  S=*****  S=*****  S=*****  S=*****  S=*****

CETCH -0.3618  -0.2915  -0.2582  -0.2646  -0.3828  -0.1975         99.0000  99.0000  99.0000  99.0000  99.0000  99.0000
      (    10) (    14) (    14) (    16) (    19) (    16)        (     0) (     0) (     0) (     0) (     0) (     0)
      S=0.152  S=0.156  S=0.186  S=0.161  S=0.053  S=0.232         S=*****  S=*****  S=*****  S=*****  S=*****  S=*****

CEBUS 99.0000   0.6502   0.3172   0.1523  -0.0898  -0.0994         99.0000  99.0000  99.0000  99.0000  99.0000  99.0000
      (    10) (    14) (    14) (    16) (    19) (    16)        (     0) (     0) (     0) (     0) (     0) (     0)
      S=*****  S=0.001  S=0.135  S=0.287  S=0.357  S=0.357         S=*****  S=*****  S=*****  S=*****  S=*****  S=*****

CEOTH 99.0000  99.0000   0.2058  -0.0843  -0.1696   0.1178         99.0000  99.0000  99.0000  99.0000  99.0000  99.0000
      (    10) (    14) (    14) (    16) (    19) (    16)        (     0) (     0) (     0) (     0) (     0) (     0)
      S=*****  S=*****  S=0.240  S=0.378  S=0.244  S=0.332         S=*****  S=*****  S=*****  S=*****  S=*****  S=*****

DRIVE  0.0774   0.3836   0.1521   0.1798   0.3905   0.2866         99.0000  99.0000  99.0000  99.0000  99.0000  99.0000
      (    10) (    13) (    13) (    14) (    17) (    14)        (     0) (     0) (     0) (     0) (     0) (     0)
      S=0.416  S=0.098  S=0.298  S=0.269  S=0.061  S=0.160         S=*****  S=*****  S=*****  S=*****  S=*****  S=*****


       OCM03    OCM06    OCM09    OCM12    OCM15    OCM18          OCT03    OCT06    OCT09    OCT12    OCT15    OCT18

CETOT  0.1083  -0.2432  -0.1849  -0.2675  -0.1841  -0.2094         -0.7698  -0.5886  -0.1963  -0.1187  -0.0391   0.0446
      (     7) (    12) (    12) (    15) (    18) (    16)        (     8) (    13) (    13) (    16) (    19) (    16)
      S=0.409  S=0.223  S=0.283  S=0.168  S=0.232  S=0.218         S=0.013  S=0.017  S=0.260  S=0.331  S=0.437  S=0.435

CETCH  0.1083  -0.2409  -0.1479  -0.2405  -0.1277  -0.0911         -0.7698  -0.5572  -0.1889  -0.1012  -0.0097   0.0871
      (     7) (    12) (    12) (    15) (    18) (    16)        (     8) (    13) (    13) (    16) (    19) (    16)
      S=0.409  S=0.225  S=0.323  S=0.194  S=0.307  S=0.369         S=0.013  S=0.024  S=0.268  S=0.355  S=0.484  S=0.374

CEBUS 99.0000   0.0107  -0.3005  -0.3526  -0.6590  -0.5569         99.0000  -0.2554  -0.1047  -0.1805  -0.2440  -0.0676
      (     7) (    12) (    12) (    15) (    18) (    16)        (     8) (    13) (    13) (    16) (    19) (    16)
      S=*****  S=0.487  S=0.171  S=0.099  S=0.001  S=0.013         S=*****  S=0.200  S=0.367  S=0.252  S=0.157  S=0.402

CEOTH 99.0000  99.0000  -0.5222  -0.2071   0.3137  -0.4031         99.0000  99.0000  -0.0782  -0.2196  -0.2228  -0.3340
      (     7) (    12) (    12) (    15) (    18) (    16)        (     8) (    13) (    13) (    16) (    19) (    16)
      S=*****  S=*****  S=0.041  S=0.229  S=0.102  S=0.061         S=*****  S=*****  S=0.400  S=0.207  S=0.180  S=0.103

DRIVE -0.5093  -0.3798  -0.0188  -0.3120  -0.0605   0.0335         -0.5065  -0.2145  -0.1400  -0.2412  -0.0877  -0.4115
      (     7) (    11) (    11) (    13) (    16) (    14)        (     8) (    12) (    12) (    14) (    17) (    14)
      S=0.122  S=0.125  S=0.478  S=0.150  S=0.412  S=0.455         S=0.103  S=0.252  S=0.332  S=0.203  S=0.369  S=0.072
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CE AND DRIVE vs. OUTCOMES

NASA - Top Schools

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         OAC03    OAC06    OAC09    UAC12    OAC15    OAC18          ORC03    ORC06    ORCC9    ORC12    ORC15    CRC18

CETOT    0.5632   0.4228   0.5490   0.6864   0.5603   0.6337         0.9527   0.4624   0.2505   0.5656   0.5541   0.6008
        (     3) (    13) (    14) (    17) (    16) (    13)       (     3) (    13) (    14) (    17) (    16) (    13)
        S=0.310  S=0.075  S=0.021  S=0.001  S=0.012  S=0.010        S=0.098  S=0.056  S=0.194  S=0.009  S=0.013  S=0.015

CETCH    0.5632   0.4333   0.5337   0.6481   0.5597   0.6461         0.9527   0.4750   0.2680   0.5744   0.5576   0.5951
        (     3) (    13) (    14) (    17) (    16) (    13)       (     3) (    13) (    14) (    17) (    16) (    13)
        S=0.310  S=0.070  S=0.025  S=0.002  S=0.012  S=0.009        S=0.098  S=0.050  S=0.177  S=0.008  S=0.012  S=0.016

CEBUS   99.0000  -0.0360   0.3455   0.5348   0.2690   0.3277        99.0000  -0.0613  -0.2059   0.2384   0.1739   0.3976
        (     3) (    13) (    14) (    17) (    16) (    13)       (     3) (    13) (    14) (    17) (    16) (    13)
        S=*****  S=0.453  S=0.113  S=0.013  S=0.157  S=0.137        S=*****  S=0.421  S=0.240  S=0.178  S=0.260  S=0.089

CEOTH   99.0000  99.0000   0.5788   0.4358   0.2520   0.5020        99.0000  99.0000   0.0981   0.2669   0.3863   0.4702
        (     3) (    13) (    14) (    17) (    16) (    13)       (     3) (    13) (    14) (    17) (    16) (    13)
        S=*****  S=*****  S=0.015  S=0.040  S=0.173  S=0.040        S=*****  S=*****  S=0.369  S=0.150  S=0.070  S=0.052

DRIVE   99.0000   0.4141   0.1734   0.3767   0.1705   0.3783        99.0000   0.3471   0.1131   0.2189   0.5162   0.2612
        (     2) (    10) (    11) (    14) (    14) (    12)       (     2) (    10) (    11) (    14) (    14) (    12)
        S=*****  S=0.123  S=0.305  S=0.092  S=0.280  S=0.113        S=*****  S=0.163  S=0.370  S=0.226  S=0.029  S=0.206


         OSP03    OSPC6    OSPC9    OSP12    OSP15    OSP18          OCR      OCR      OCR      OCR      CCR      CCR

CETOT   -0.6321  -0.4485  -0.3900  -0.3654  -0.2756   0.2084        99.0000  99.0000  99.0000  99.0000  99.0000  99.0000
        (     8) (    14) (    14) (    17) (    16) (    13)       (     0) (     0) (     0) (     0) (     0) (     0)
        S=0.046  S=0.054  S=0.084  S=0.075  S=0.151  S=0.247        S=*****  S=*****  S=*****  S=*****  S=*****  S=*****

CETCH   -0.6200  -0.4525  -0.3623  -0.3515  -0.3073   0.1136        99.0000  99.0000  99.0000  99.0000  99.0000  99.0000
        (     8) (    14) (    14) (    17) (    16) (    13)       (     0) (     0) (     0) (     0) (     0) (     0)
        S=0.051  S=0.052  S=0.089  S=0.083  S=0.123  S=0.356        S=*****  S=*****  S=*****  S=*****  S=*****  S=*****

CEBUS   -0.2421  -0.1284  -0.3755  -0.2507   0.2505   0.5417        99.0000  99.0000  99.0000  99.0000  99.0000  99.0000
        (     8) (    14) (    14) (    17) (    16) (    13)       (     0) (     0) (     0) (     0) (     0) (     0)
        S=0.282  S=0.331  S=0.093  S=0.166  S=0.138  S=0.028        S=*****  S=*****  S=*****  S=*****  S=*****  S=*****

CEOTH   99.0000  99.0000  -0.0351  -0.2227  -0.1783   0.2494        99.0000  99.0000  99.0000  99.0000  99.0000  99.0000
        (     8) (    14) (    14) (    17) (    16) (    13)       (     0) (     0) (     0) (     0) (     0) (     0)
        S=*****  S=*****  S=0.453  S=0.195  S=0.254  S=0.206        S=*****  S=*****  S=*****  S=*****  S=*****  S=*****

DRIVE    0.0017  -0.1243   0.0689   0.1494   0.3300   0.2253        99.0000  99.0000  99.0000  99.0000  99.0000  99.0000
        (     7) (    11) (    11) (    14) (    13) (    11)       (     0) (     0) (     0) (     0) (     0) (     0)
        S=0.499  S=0.359  S=0.420  S=0.305  S=0.135  S=0.253        S=*****  S=*****  S=*****  S=*****  S=*****  S=*****


         OCM03    OCM06    OCM09    OCM12    OCM15    OCM18          OCT03    OCT06    OCT09    OCT12    OCT15    OCT18

CETOT   -0.3682  -0.1198  -0.0787  -0.1987   0.1319  -0.3270        -0.5564  -0.2789   0.0253  -0.1725  -0.1257   0.1565
        (     8) (    15) (    15) (    18) (    17) (    14)       (     8) (    15) (    15) (    18) (    17) (    14)
        S=0.185  S=0.335  S=0.390  S=0.215  S=0.307  S=0.127        S=0.076  S=0.157  S=0.464  S=0.247  S=0.315  S=0.297

CETCH   -0.3729  -0.1309  -0.0688  -0.2128   0.1348  -0.2398        -0.5782  -0.2837   0.0309  -0.1939  -0.1143   0.1730
        (     8) (    15) (    15) (    18) (    17) (    14)       (     8) (    15) (    15) (    18) (    17) (    14)
        S=0.181  S=0.321  S=0.404  S=0.198  S=0.303  S=0.205        S=0.067  S=0.153  S=0.456  S=0.220  S=0.331  S=0.277

CEBUS    0.0788   0.1792   0.0090  -0.1458  -0.0263  -0.5745         0.4360  -0.0350  -0.0452  -0.0673  -0.1127   0.0395
        (     8) (    15) (    15) (    18) (    17) (    14)       (     8) (    15) (    15) (    18) (    17) (    14)
        S=0.426  S=0.261  S=0.487  S=0.282  S=0.460  S=0.016        S=0.140  S=0.451  S=0.436  S=0.395  S=0.333  S=0.447

CEOTH   99.0000  99.0000  -0.4912   0.3388   0.2186  -0.3213        99.0000  99.0000  -0.0876   0.2715  -0.3202  -0.1608
        (     8) (    15) (    15) (    18) (    17) (    14)       (     8) (    15) (    15) (    18) (    17) (    14)
        S=*****  S=*****  S=0.031  S=0.085  S=0.200  S=0.131        S=*****  S=*****  S=0.378  S=0.138  S=0.105  S=0.291

DRIVE   -0.9438   0.0749  -0.2143  -0.3336   0.1695  -0.0821        -0.4323  -0.1878  -0.0554  -0.0928  -0.0596  -0.1479
        (     6) (    11) (    11) (    14) (    14) (    12)       (     6) (    11) (    11) (    14) (    14) (    12)
        S=0.002  S=0.413  S=0.263  S=0.122  S=0.281  S=0.400        S=0.196  S=0.290  S=0.436  S=0.376  S=0.420  S=0.323
```

CE AND DRIVE vs. OUTCOMES

NASA - Low GPA

```
        OAC03   OAC06   OAC09   OAC12   OAC15   OAC18

CETOT   0.2268  0.1049  0.6290  0.2123  0.4301  0.6096
       (    4)(    6)(   10)(   13)(   16)(   15)
       S=0.386 S=0.422 S=0.026 S=0.243 S=0.048 S=0.008

CETCH  -0.2468  0.1049  0.6290  0.1078  0.4362  0.5820
       (    4)(    6)(   10)(   13)(   16)(   15)
       S=0.377 S=0.422 S=0.026 S=0.363 S=0.046 S=0.011

CEBUS   0.9634 99.0000 99.0000  0.6801 -0.0219  0.0069
       (    4)(    6)(   10)(   13)(   16)(   15)
       S=0.018 S=***** S=***** S=0.005 S=0.468 S=0.490

CEOTH  99.0000 99.0000 99.0000 99.0000 99.0000  0.2969
       (    4)(    6)(   10)(   13)(   16)(   15)
       S=***** S=***** S=***** S=***** S=***** S=0.141

DRIVE   0.3498  0.1151  0.3854  0.1798 -0.0716  0.0035
       (    4)(    5)(    9)(   12)(   15)(   14)
       S=0.325 S=0.414 S=0.153 S=0.288 S=0.400 S=0.495


        OSP03   OSP06   OSP09   OSP12   OSP15   OSP18

CETOT   0.5454  0.4363  0.0145  0.0109 -0.0057 -0.3530
       (   10)(   15)(   14)(   16)(   16)(   15)
       S=0.051 S=0.052 S=0.480 S=0.484 S=0.492 S=0.098

CETCH   0.5293  0.4363  0.0188  0.0274  0.0098 -0.3394
       (   10)(   15)(   14)(   16)(   16)(   15)
       S=0.058 S=0.052 S=0.475 S=0.460 S=0.486 S=0.108

CEBUS   0.1165 99.0000 -0.0932 -0.1278 -0.1520 -0.0717
       (   10)(   15)(   14)(   16)(   16)(   15)
       S=0.374 S=***** S=0.376 S=0.319 S=0.287 S=0.400

CEOTH  99.0000 99.0000 99.0000 -0.0386 99.0000 -0.0831
       (   10)(   15)(   14)(   16)(   16)(   15)
       S=***** S=***** S=***** S=0.444 S=***** S=0.384

DRIVE   0.0161  0.3792  0.2753  0.2987  0.2703  0.2165
       (    6)(   12)(   11)(   13)(   15)(   14)
       S=0.485 S=0.113 S=0.205 S=0.161 S=0.165 S=0.229


        OCM03   OCM06   OCM09   OCM12   OCM15   OCM18

CETOT   0.0477 -0.4025 -0.1854 -0.2867 -0.1412 -0.1306
       (    8)(   13)(   12)(   15)(   14)(   14)
       S=0.455 S=0.086 S=0.282 S=0.150 S=0.315 S=0.328

CETCH  -0.0110 -0.4025 -0.1739 -0.2722 -0.1017 -0.1170
       (    8)(   13)(   12)(   15)(   14)(   14)
       S=0.490 S=0.086 S=0.294 S=0.163 S=0.365 S=0.345

CEBUS   0.2757 99.0000 -0.2040 -0.1118 -0.3824 -0.0142
       (    8)(   13)(   12)(   15)(   14)(   14)
       S=0.254 S=***** S=0.262 S=0.346 S=0.089 S=0.481

CEOTH  99.0000 99.0000 99.0000 -0.4097 99.0000 -0.1136
       (    8)(   13)(   12)(   15)(   14)(   14)
       S=***** S=***** S=***** S=0.065 S=***** S=0.350

DRIVE   0.3184  0.0000 -0.2925 -0.5826 -0.5296 -0.3988
       (    6)(   10)(    9)(   12)(   13)(   13)
       S=0.269 S=0.500 S=0.222 S=0.023 S=0.031 S=0.089
```

```
 ORC03   ORC06   ORC09   ORC12   ORC15   ORC18

 0.3539  0.6439  0.4491  0.1450  0.1187  0.0446
(    4)(    6)(   10)(   13)(   16)(   15)
S=0.323 S=0.084 S=0.096 S=0.318 S=0.331 S=0.437

 0.7016  0.6439  0.4491  0.1812  0.1610  0.1248
(    4)(    6)(   10)(   13)(   16)(   15)
S=0.149 S=0.084 S=0.096 S=0.277 S=0.276 S=0.329

-0.5652 99.0000 99.0000 -0.1901 -0.4209 -0.3450
(    4)(    6)(   10)(   13)(   16)(   15)
S=0.217 S=***** S=***** S=0.267 S=0.052 S=0.104

99.0000 99.0000 99.0000 99.0000 99.0000 -0.2333
(    4)(    6)(   10)(   13)(   16)(   15)
S=***** S=***** S=***** S=***** S=***** S=0.201

 0.0980 -0.5216  0.1319 -0.0094 -0.2496 -0.0265
(    4)(    5)(    9)(   12)(   15)(   14)
S=0.451 S=0.144 S=0.368 S=0.488 S=0.185 S=0.464


 OCR     OCR     OCR     OCR     OCR     OCR

99.0000 99.0000 99.0000 99.0000 99.0000 99.0000
(    0)(    0)(    0)(    0)(    0)(    0)
S=***** S=***** S=***** S=***** S=***** S=*****

99.0000 99.0000 99.0000 99.0000 99.0000 99.0000
(    0)(    0)(    0)(    0)(    0)(    0)
S=***** S=***** S=***** S=***** S=***** S=*****

99.0000 99.0000 99.0000 99.0000 99.0000 99.0000
(    0)(    0)(    0)(    0)(    0)(    0)
S=***** S=***** S=***** S=***** S=***** S=*****

99.0000 99.0000 99.0000 99.0000 99.0000 99.0000
(    0)(    0)(    0)(    0)(    0)(    0)
S=***** S=***** S=***** S=***** S=***** S=*****

99.0000 99.0000 99.0000 99.0000 99.0000 99.0000
(    0)(    0)(    0)(    0)(    0)(    0)
S=***** S=***** S=***** S=***** S=***** S=*****


 OCT03   OCT06   OCT09   OCT12   OCT15   OCT18

-0.0216 -0.5843 -0.4867 -0.0654  0.1669  0.1150
(    9)(   14)(   13)(   16)(   15)(   14)
S=0.478 S=0.014 S=0.046 S=0.405 S=0.276 S=0.348

-0.0704 -0.5843 -0.4957 -0.1446  0.1803  0.0915
(    9)(   14)(   13)(   16)(   15)(   14)
S=0.429 S=0.014 S=0.042 S=0.297 S=0.260 S=0.378

 0.2294 99.0000  0.2380  0.7134 -0.1108  0.1038
(    9)(   14)(   13)(   16)(   15)(   14)
S=0.276 S=***** S=0.217 S=0.001 S=0.347 S=0.362

99.0000 99.0000 99.0000 -0.2100 99.0000  0.0523
(    9)(   14)(   13)(   16)(   15)(   14)
S=***** S=***** S=***** S=0.218 S=***** S=0.429

 0.2329 -0.0819  0.0692  0.2538  0.2847  0.3166
(    7)(   11)(   13)(   13)(   14)(   13)
S=0.308 S=0.405 S=0.425 S=0.201 S=0.162 S=0.146
```

APPENDIX 6H

CE AND DRIVE vs. OUTCOMES

NASA - Mid GPA

```
        OAC03    OAC06    OAC09    OAC12    OAC15    OAC18          ORC03    ORC06    ORC09    ORC12    ORC15    ORC18

CETOT  -0.3798  -0.2976   0.5670   0.7092   0.9124   0.8845        -0.0775   0.3136   0.6861   0.5671   0.7101   0.6073
       (   16)  (   16)  (   14)  (   16)  (   11)  (    5)        (   16)  (   16)  (   14)  (   16)  (   11)  (    5)
       S=0.073  S=0.131  S=0.017  S=0.001  S=0.001  S=0.033        S=0.388  S=0.118  S=0.005  S=0.011  S=0.007  S=0.139

CETCH  -0.3890  -0.2540   0.5579   0.6901   0.7937   0.8501        -0.0663   0.2265   0.6178   0.5389   0.5854   0.4977
       (   16)  (   16)  (   14)  (   16)  (   11)  (    5)        (   16)  (   16)  (   14)  (   16)  (   11)  (    5)
       S=0.068  S=0.171  S=0.019  S=0.002  S=0.002  S=0.034        S=0.375  S=0.199  S=0.009  S=0.016  S=0.029  S=0.197

CEBUS   0.3556  -0.2230  -0.0432   0.2630   0.4438   0.3238         0.7715   0.4653   0.0685   0.3112   0.4128   0.5532
       (   16)  (   16)  (   14)  (   16)  (   11)  (    5)        (   16)  (   16)  (   14)  (   16)  (   11)  (    5)
       S=0.088  S=0.203  S=0.442  S=0.163  S=0.086  S=0.297        S=0.001  S=0.035  S=0.408  S=0.120  S=0.104  S=0.167

CEOTH   0.4989   0.6408  -0.0260   0.1960   0.5044   0.7267         0.2472  -0.2593   0.2750   0.1248   0.5533   0.3590
       (   16)  (   16)  (   14)  (   16)  (   11)  (    5)        (   16)  (   16)  (   14)  (   16)  (   11)  (    5)
       S=0.025  S=0.004  S=0.465  S=0.233  S=0.057  S=0.082        S=0.178  S=0.166  S=0.171  S=0.323  S=0.039  S=0.276

DRIVE   0.1485   0.0218   0.1154  -0.0950   0.0730  -0.2412         0.1878  -0.3000   0.1655   0.0432  -0.3396  -0.3404
       (   15)  (   13)  (   13)  (   15)  (   10)  (    5)        (   15)  (   15)  (   13)  (   15)  (   10)  (    5)
       S=0.299  S=0.459  S=0.354  S=0.368  S=0.424  S=0.348        S=0.251  S=0.139  S=0.295  S=0.439  S=0.169  S=0.288


        OSP03    OSP06    OSP09    OSP12    OSP15    OSP18          OCR      OCR      OCR      OCR      OCR      OCR

CETOT  -0.3096  -0.2951  -0.2824   0.5441   0.0453   0.0028        99.0000  99.0000  99.0000  99.0000  99.0000  99.0000
       (   24)  (   18)  (   17)  (   19)  (   14)  (    8)        (    0)  (    0)  (    0)  (    0)  (    0)  (    0)
       S=0.070  S=0.117  S=0.164  S=0.008  S=0.439  S=0.497        S=*****  S=*****  S=*****  S=*****  S=*****  S=*****

CETCH  -0.3000  -0.3582  -0.2539   0.4920  -0.1184  -0.1744        99.0000  99.0000  99.0000  99.0000  99.0000  99.0000
       (   24)  (   18)  (   17)  (   19)  (   14)  (    8)        (    0)  (    0)  (    0)  (    0)  (    0)  (    0)
       S=0.077  S=0.072  S=0.163  S=0.016  S=0.343  S=0.340        S=*****  S=*****  S=*****  S=*****  S=*****  S=*****

CEBUS  -0.0630   0.4894   0.1155   0.6117   0.6645   0.6354        99.0000  99.0000  99.0000  99.0000  99.0000  99.0000
       (   24)  (   18)  (   17)  (   19)  (   14)  (    8)        (    0)  (    0)  (    0)  (    0)  (    0)  (    0)
       S=0.385  S=0.020  S=0.330  S=0.003  S=0.003  S=0.045        S=*****  S=*****  S=*****  S=*****  S=*****  S=*****

CEOTH  -0.0629  -0.0047  -0.2515  -0.1357  -0.1237  -0.1381        99.0000  99.0000  99.0000  99.0000  99.0000  99.0000
       (   24)  (   18)  (   17)  (   19)  (   14)  (    8)        (    0)  (    0)  (    0)  (    0)  (    0)  (    0)
       S=0.350  S=0.493  S=0.165  S=0.290  S=0.337  S=0.372        S=*****  S=*****  S=*****  S=*****  S=*****  S=*****

DRIVE  -0.0217   0.2603   0.2756   0.3258   0.1803   0.1331        99.0000  99.0000  99.0000  99.0000  99.0000  99.0000
       (   19)  (   15)  (   13)  (   14)  (    9)  (    5)        (    0)  (    0)  (    0)  (    0)  (    0)  (    0)
       S=0.465  S=0.174  S=0.181  S=0.128  S=0.321  S=0.416        S=*****  S=*****  S=*****  S=*****  S=*****  S=*****


        OCM03    OCM06    OCM09    OCM12    OCM15    OCM18          OCT03    OCT06    OCT09    OCT12    OCT15    OCT18

CETOT   0.3131  -0.1235   0.3508  -0.1361   0.0763  -0.0347        -0.0663   0.0894  -0.2026   0.0357   0.0677   0.1607
       (   25)  (   20)  (   19)  (   21)  (   15)  (    8)        (   25)  (   20)  (   19)  (   21)  (   15)  (    8)
       S=0.064  S=0.302  S=0.070  S=0.278  S=0.393  S=0.468        S=0.376  S=0.354  S=0.203  S=0.439  S=0.405  S=0.352

CETCH   0.3458  -0.0955   0.3826  -0.0762   0.2884   0.1063        -0.0234   0.1222  -0.1701   0.0536   0.0025   0.2530
       (   25)  (   20)  (   19)  (   21)  (   15)  (    8)        (   25)  (   20)  (   19)  (   21)  (   15)  (    8)
       S=0.045  S=0.344  S=0.053  S=0.371  S=0.149  S=0.401        S=0.456  S=0.304  S=0.243  S=0.409  S=0.497  S=0.273

CEBUS  -0.2314  -0.1463  -0.3446  -0.5173  -0.6546  -0.4576        -0.2515  -0.2178  -0.3055  -0.2436   0.2394  -0.1680
       (   25)  (   20)  (   19)  (   21)  (   15)  (    8)        (   25)  (   20)  (   19)  (   21)  (   15)  (    8)
       S=0.133  S=0.269  S=0.074  S=0.008  S=0.004  S=0.127        S=0.113  S=0.178  S=0.102  S=0.144  S=0.195  S=0.345

CEOTH   0.1534  -0.0339   0.2332   0.0653  -0.3090  -0.2364        -0.3308  -0.2708   0.2307   0.3036   0.0510  -0.5698
       (   25)  (   20)  (   19)  (   21)  (   15)  (    8)        (   25)  (   20)  (   19)  (   21)  (   15)  (    8)
       S=0.232  S=0.444  S=0.168  S=0.389  S=0.131  S=0.286        S=0.053  S=0.124  S=0.171  S=0.090  S=0.428  S=0.070

DRIVE   0.2309   0.1629   0.4812   0.3143   0.6078   0.9423        -0.0968   0.0554   0.3493   0.0951   0.1603  -0.0713
       (   19)  (   15)  (   14)  (   15)  (   10)  (    5)        (   19)  (   15)  (   14)  (   15)  (   10)  (    5)
       S=0.171  S=0.352  S=0.041  S=0.127  S=0.031  S=0.008        S=0.347  S=0.418  S=0.117  S=0.368  S=0.329  S=0.455
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CE AND DRIVE vs. OUTCOMES

NASA - High GPA

APPENDIX 6J

```
          OAC03   UAC06   OAC09   OAC12   OAC15   OAC18

CETOT  -0.3610 -0.3567  0.5167  0.6534  0.8863  0.7591
       (   19) (   18) (   17) (   21) (   15) (   11)
       S=0.064 S=0.073 S=0.017 S=0.001 S=0.001 S=0.003

CETCH  -0.4213 -0.3251  0.5145  0.6163  0.7939  0.7171
       (   19) (   18) (   17) (   21) (   15) (   11)
       S=0.036 S=0.094 S=0.017 S=0.001 S=0.001 S=0.007

CEBUS   0.4829 -0.2381 -0.0056  0.3436  0.5140  0.3668
       (   19) (   18) (   17) (   21) (   15) (   11)
       S=0.018 S=0.171 S=0.491 S=0.064 S=0.025 S=0.134

CEOTH   0.4042  0.6385  0.0181  0.2266  0.5017  0.2730
       (   19) (   18) (   17) (   21) (   15) (   11)
       S=0.043 S=0.002 S=0.473 S=0.162 S=0.028 S=0.208

DRIVE   0.2158  0.0351  0.0239 -0.0660  0.0108  0.3723
       (   17) (   17) (   16) (   20) (   15) (   11)
       S=0.203 S=0.447 S=0.465 S=0.391 S=0.485 S=0.130


          OSP03   USP06   OSP09   CSP12   OSP15   OSP18

CETOT  -0.2318  0.1418 -0.1357  0.0239 -0.1533 -0.4206
       (   29) (   26) (   23) (   26) (   17) (   12)
       S=0.113 S=0.245 S=0.268 S=0.454 S=0.229 S=0.087

CETCH  -0.2215  0.1419 -0.1216  0.0258 -0.1626 -0.4454
       (   29) (   26) (   23) (   26) (   17) (   12)
       S=0.124 S=0.245 S=0.290 S=0.450 S=0.266 S=0.073

CEBUS  -0.0577 -0.0150 -0.0974  0.0456 -0.1292  0.0006
       (   29) (   26) (   23) (   26) (   17) (   12)
       S=0.383 S=0.471 S=0.329 S=0.412 S=0.311 S=0.499

CEOTH  -0.0610  0.1850 -0.0858 -0.1119 -0.1016 -0.2381
       (   29) (   26) (   23) (   26) (   17) (   12)
       S=0.377 S=0.183 S=0.349 S=0.293 S=0.349 S=0.228

DRIVE  -0.0598  0.1295  0.3023  0.3624  0.3099  0.1153
       (   22) (   21) (   18) (   20) (   14) (   10)
       S=0.395 S=0.288 S=0.111 S=0.058 S=0.140 S=0.376


          OCM03   OCM06   OCM09   OCM12   OCM15   OCM18

CETOT   0.3049 -0.2759  0.2157 -0.1770  0.0652 -0.1061
       (   29) (   27) (   24) (   27) (   18) (   13)
       S=0.054 S=0.082 S=0.156 S=0.189 S=0.399 S=0.365

CETCH   0.3197 -0.2630  0.2384 -0.1580  0.2092  0.0009
       (   29) (   27) (   24) (   27) (   18) (   13)
       S=0.045 S=0.092 S=0.131 S=0.216 S=0.202 S=0.499

CEBUS  -0.0946 -0.1074 -0.2836 -0.3549 -0.4171 -0.4710
       (   29) (   27) (   24) (   27) (   18) (   13)
       S=0.313 S=0.297 S=0.090 S=0.035 S=0.043 S=0.052

CECTH   0.1339 -0.0620  0.2076  0.2578 -0.2623  0.0997
       (   29) (   27) (   24) (   27) (   18) (   13)
       S=0.244 S=0.379 S=0.165 S=0.097 S=0.147 S=0.373

DRIVE   0.3795  0.2235  0.4939  0.2069  0.3075 -0.1829
       (   21) (   21) (   18) (   20) (   15) (   11)
       S=0.045 S=0.155 S=0.019 S=0.198 S=0.132 S=0.295
```

```
 ORC03    ORC06    ORC09    ORC12    ORC15    ORC18

-0.0057   0.1221   0.5214   0.4998   0.4800   0.5061
(   19)  (   18)  (   17)  (   21)  (   15)  (   11)
S=0.491  S=0.315  S=0.016  S=0.011  S=0.035  S=0.056

-0.0005   0.0400   0.4718   0.4627   0.4377   0.4877
(   19)  (   18)  (   17)  (   21)  (   15)  (   11)
S=0.499  S=0.437  S=0.028  S=0.017  S=0.051  S=0.064

-0.0846   0.6054   0.3027   0.3935   0.2504   0.2364
(   19)  (   18)  (   17)  (   21)  (   15)  (   11)
S=0.365  S=0.004  S=0.119  S=0.039  S=0.184  S=0.242

 0.2431  -0.2548   0.2062   0.0443   0.2492  -0.0950
(   19)  (   18)  (   17)  (   21)  (   15)  (   11)
S=0.158  S=0.154  S=0.214  S=0.424  S=0.185  S=0.391

 0.0859  -0.1644   0.1519   0.1437   0.1316   0.4817
(   17)  (   17)  (   15)  (   20)  (   15)  (   11)
S=0.371  S=0.256  S=0.287  S=0.273  S=0.320  S=0.067


 OCR      OCR      CCR      OCR      OCR      OCR

99.0000  99.0000  99.0000  99.0000  99.0000  99.0000
(    0)  (    0)  (    0)  (    0)  (    0)  (    0)
S=*****  S=*****  S=*****  S=*****  S=*****  S=*****

99.0000  99.0000  99.0000  99.0000  99.0000  99.0000
(    0)  (    0)  (    0)  (    0)  (    0)  (    0)
S=*****  S=*****  S=*****  S=*****  S=*****  S=*****

99.0000  99.0000  99.0000  99.0000  99.0000  99.0000
(    0)  (    0)  (    0)  (    0)  (    0)  (    0)
S=*****  S=*****  S=*****  S=*****  S=*****  S=*****

99.0000  99.0000  99.0000  99.0000  99.0000  99.0000
(    0)  (    0)  (    0)  (    0)  (    0)  (    0)
S=*****  S=*****  S=*****  S=*****  S=*****  S=*****

99.0000  99.0000  99.0000  99.0000  99.0000  99.0000
(    0)  (    0)  (    0)  (    0)  (    0)  (    0)
S=*****  S=*****  S=*****  S=*****  S=*****  S=*****


 OCT03    UCT06    OCT09    OCT12    OCT15    OCT18

-0.0400  -0.3072  -0.2171  -0.0623   0.2009   0.4709
(   29)  (   27)  (   24)  (   27)  (   18)  (   13)
S=0.418  S=0.060  S=0.154  S=0.379  S=0.212  S=0.052

-0.0147  -0.2806  -0.1917  -0.0821   0.1802   0.4607
(   29)  (   27)  (   24)  (   27)  (   18)  (   13)
S=0.470  S=0.078  S=0.185  S=0.342  S=0.237  S=0.057

-0.1193  -0.2174  -0.3046  -0.0965   0.1475   0.2164
(   29)  (   27)  (   24)  (   27)  (   18)  (   13)
S=0.269  S=0.138  S=0.074  S=0.316  S=0.280  S=0.239

-0.3017  -0.1881   0.2058   0.4536   0.0      -0.0976
(   29)  (   27)  (   24)  (   27)  (   18)  (   13)
S=0.056  S=0.174  S=0.167  S=0.009  S=0.500  S=0.376

 0.0316   0.0151   0.2363   0.1723   0.0882   0.1212
(   21)  (   21)  (   18)  (   20)  (   15)  (   11)
S=0.446  S=0.474  S=0.173  S=0.234  S=0.377  S=0.361
```

CE AND DRIVE vs. OUTCOMES

NASA - Honors

```
         OAC03    OAC06    OAC09    OAC12    OAC15    OAC18

CETOT   0.5828   0.2272   0.5385   0.7274   0.5200   0.5892
        (    4)  (   18)  (   23)  (   27)  (   30)  (   24)
        S=0.209  S=0.182  S=0.004  S=0.001  S=0.002  S=0.001

CETCH   0.5828   0.2222   0.5344   0.6998   0.5237   0.5984
        (    4)  (   18)  (   23)  (   27)  (   30)  (   24)
        S=0.209  S=0.188  S=0.004  S=0.001  S=0.001  S=0.001

CEBUS  99.0000   0.0194   0.1768   0.5473   0.0989   0.1529
        (    4)  (   18)  (   23)  (   27)  (   30)  (   24)
        S=*****  S=0.470  S=0.218  S=0.002  S=0.301  S=0.238

CEOTH  99.0000  99.0000   0.3319   0.4714   0.2024   0.3519
        (    4)  (   18)  (   23)  (   27)  (   30)  (   24)
        S=*****  S=*****  S=0.061  S=0.007  S=0.142  S=0.046

DRIVE   0.3372   0.2512   0.3074   0.2055   0.0716   0.0310
        (    4)  (   15)  (   19)  (   23)  (   26)  (   22)
        S=0.331  S=0.183  S=0.133  S=0.173  S=0.364  S=0.445
```

```
         OSP03    OSP06    OSP09    OSP12    OSP15    OSP18

CETOT  -0.3159  -0.2392  -0.1628  -0.2594  -0.2197  -0.0209
        (   13)  (   21)  (   22)  (   26)  (   29)  (   25)
        S=0.103  S=0.148  S=0.235  S=0.100  S=0.126  S=0.461

CETCH  -0.3719  -0.3144  -0.1620  -0.2608  -0.2345  -0.0709
        (   13)  (   21)  (   22)  (   26)  (   29)  (   25)
        S=0.105  S=0.083  S=0.236  S=0.099  S=0.110  S=0.368

CEBUS  -0.1260   0.5119  -0.0647  -0.1404   0.1230   0.2282
        (   13)  (   21)  (   22)  (   26)  (   29)  (   25)
        S=0.341  S=0.001  S=0.387  S=0.247  S=0.262  S=0.136

CEOTH  99.0000  99.0000  -0.0418  -0.1175  -0.1309   0.0225
        (   13)  (   21)  (   22)  (   26)  (   29)  (   25)
        S=*****  S=*****  S=0.427  S=0.284  S=0.249  S=0.457

DRIVE   0.2542   0.2062   0.0512   0.2262   0.2370   0.2415
        (   12)  (   17)  (   17)  (   21)  (   23)  (   21)
        S=0.213  S=0.214  S=0.423  S=0.162  S=0.138  S=0.146
```

```
         OCM03    OCM06    OCM09    OCM12    OCM15    OCM18

CETOT  -0.1697  -0.1285  -0.0059  -0.1135  -0.0029  -0.3195
        (   12)  (   22)  (   23)  (   28)  (   29)  (   25)
        S=0.299  S=0.284  S=0.489  S=0.283  S=0.494  S=0.060

CETCH  -0.1753  -0.1266   0.0087  -0.0916   0.0369  -0.2538
        (   12)  (   22)  (   23)  (   28)  (   29)  (   25)
        S=0.293  S=0.287  S=0.484  S=0.321  S=0.425  S=0.110

CEBUS   0.1183  -0.0232  -0.0885  -0.1832  -0.5122  -0.3851
        (   12)  (   22)  (   23)  (   28)  (   29)  (   25)
        S=0.357  S=0.459  S=0.344  S=0.175  S=0.002  S=0.029

CEOTH  99.0000  99.0000  -0.3795  -0.0884   0.2264  -0.2639
        (   12)  (   22)  (   23)  (   28)  (   29)  (   25)
        S=*****  S=*****  S=0.037  S=0.327  S=0.119  S=0.101

DRIVE  -0.3735  -0.1073  -0.2889  -0.4214  -0.2874   0.0635
        (   10)  (   17)  (   17)  (   22)  (   23)  (   21)
        S=0.141  S=0.341  S=0.131  S=0.025  S=0.092  S=0.392
```

```
 ORC03    ORC06    ORC09    ORC12    ORC15    ORC18

 0.8913   0.6545   0.3821   0.4811   0.3284   0.4287
(    4)  (   18)  (   23)  (   27)  (   30)  (   24)
S=0.054  S=0.002  S=0.036  S=0.006  S=0.038  S=0.018

 0.8913   0.6591   0.4040   0.4996   0.3480   0.4268
(    4)  (   18)  (   23)  (   27)  (   30)  (   24)
S=0.054  S=0.001  S=0.028  S=0.004  S=0.030  S=0.019

99.0000  -0.1413  -0.2255   0.1350  -0.1872   0.2016
(    4)  (   18)  (   23)  (   27)  (   30)  (   24)
S=*****  S=0.288  S=0.150  S=0.251  S=0.161  S=0.172

99.0000  99.0000   0.1516   0.4479   0.3152   0.1270
(    4)  (   18)  (   23)  (   27)  (   30)  (   24)
S=*****  S=*****  S=0.191  S=0.010  S=0.045  S=0.277

 0.7321  -0.2173  -0.0908  -0.1351  -0.1279  -0.1968
(    4)  (   15)  (   19)  (   23)  (   26)  (   22)
S=0.134  S=0.218  S=0.371  S=0.269  S=0.267  S=0.190
```

```
 OCR      OCR      OCR      OCR      OCR      OCR

99.0000  99.0000  99.0000  99.0000  99.0000  99.0000
(    0)  (    0)  (    0)  (    0)  (    0)  (    0)
S=*****  S=*****  S=*****  S=*****  S=*****  S=*****

99.0000  99.0000  99.0000  99.0000  99.0000  99.0000
(    0)  (    0)  (    0)  (    0)  (    0)  (    0)
S=*****  S=*****  S=*****  S=*****  S=*****  S=*****

99.0000  99.0000  99.0000  99.0000  99.0000  99.0000
(    0)  (    0)  (    0)  (    0)  (    0)  (    0)
S=*****  S=*****  S=*****  S=*****  S=*****  S=*****

99.0000  99.0000  99.0000  99.0000  99.0000  99.0000
(    0)  (    0)  (    0)  (    0)  (    0)  (    0)
S=*****  S=*****  S=*****  S=*****  S=*****  S=*****

99.0000  99.0000  99.0000  99.0000  99.0000  99.0000
(    0)  (    0)  (    0)  (    0)  (    0)  (    0)
S=*****  S=*****  S=*****  S=*****  S=*****  S=*****
```

```
 OCT03    OCT06    OCT09    OCT12    OCT15    OCT18

-0.5959  -0.1976  -0.0858  -0.0788  -0.1850  -0.0658
(   13)  (   23)  (   24)  (   29)  (   30)  (   25)
S=0.016  S=0.183  S=0.345  S=0.342  S=0.164  S=0.377

-0.6164  -0.2000  -0.0894  -0.0947  -0.1792  -0.0291
(   13)  (   23)  (   24)  (   29)  (   30)  (   25)
S=0.012  S=0.180  S=0.339  S=0.312  S=0.172  S=0.445

 0.4402   0.0272   0.0332   0.0581  -0.0857  -0.1472
(   13)  (   23)  (   24)  (   29)  (   30)  (   25)
S=0.066  S=0.451  S=0.439  S=0.382  S=0.326  S=0.241

99.0000  99.0000  -0.0535  -0.1205  -0.1847  -0.1881
(   13)  (   23)  (   24)  (   29)  (   30)  (   25)
S=*****  S=*****  S=0.402  S=0.267  S=0.164  S=0.184

-0.4117  -0.0838   0.0705   0.0051   0.0     -0.0882
(   11)  (   19)  (   18)  (   23)  (   24)  (   21)
S=0.104  S=0.37   S=0.39   S=0.491  S=0.500  S=0.352
```

CE AND DRIVE vs. OUTCOMES

NASA - No Honors

```
       OAC03   OAC06   OAC09   OAC12   OAC15   OAC18

CETOT -0.6389 -0.1932  0.5301  0.6568  0.8190  0.5930
      (    3) (    6) (    7) (    9) (    7) (    5)
      S=0.279 S=0.357 S=0.110 S=0.027 S=0.012 S=0.146

CETCH -0.6389 -0.1295  0.5023  0.5971  0.7131  0.6780
      (    3) (    6) (    7) (    9) (    7) (    5)
      S=0.279 S=0.403 S=0.125 S=0.045 S=0.036 S=0.104

CEBUS 99.0000 -0.2506  0.3009  0.5246  0.3144 -0.3090
      (    3) (    6) (    7) (    9) (    7) (    5)
      S=***** S=0.316 S=0.256 S=0.074 S=0.246 S=0.306

CEOTH 99.0000 99.0000  0.1272  0.4781  0.5806 99.0000
      (    3) (    6) (    7) (    9) (    7) (    5)
      S=***** S=***** S=0.393 S=0.096 S=0.086 S=*****

DRIVE -0.0786  0.2699  0.2197  0.3563  0.5693  0.2694
      (    3) (    6) (    7) (    9) (    7) (    5)
      S=0.475 S=0.302 S=0.318 S=0.173 S=0.091 S=0.331


       OSP03   OSP06   OSP09   OSP12   OSP15   OSP18

CETOT -0.4623 -0.5608 -0.5555 -0.4734 -0.5866 -0.6270
      (    7) (    8) (    8) (    9) (    6) (    4)
      S=0.148 S=0.074 S=0.076 S=0.099 S=0.111 S=0.187

CETCH -0.4451 -0.5268 -0.5329 -0.4606 -0.5335 -0.4691
      (    7) (    8) (    8) (    9) (    6) (    4)
      S=0.158 S=0.090 S=0.087 S=0.106 S=0.138 S=0.265

CEBUS -0.0584 -0.1659 -0.2245 -0.2718 -0.1734 -0.6640
      (    7) (    8) (    8) (    9) (    6) (    4)
      S=0.417 S=0.330 S=0.296 S=0.240 S=0.371 S=0.158

CEOTH 99.0000 99.0000 -0.2419 -0.2691 -0.1300 99.0000
      (    7) (    8) (    8) (    9) (    6) (    4)
      S=***** S=***** S=0.282 S=0.242 S=0.403 S=*****

DRIVE -0.1193  0.0555  0.0799  0.1089  0.0812  0.9984
      (    7) (    8) (    8) (    9) (    6) (    4)
      S=0.399 S=0.448 S=0.425 S=0.390 S=0.439 S=0.001


       OCM03   OCM06   OCM09   OCM12   OCM15   OCM18

CETOT  0.4908  0.4988  0.3670  0.1432  0.3636 -0.5105
      (    7) (    8) (    8) (    9) (    7) (    5)
      S=0.132 S=0.104 S=0.186 S=0.357 S=0.211 S=0.190

CETCH  0.6463  0.5679  0.4427  0.2816  0.5515 -0.3867
      (    7) (    8) (    8) (    9) (    7) (    5)
      S=0.058 S=0.071 S=0.136 S=0.231 S=0.100 S=0.260

CEBUS -0.5136 -0.3522 -0.3615 -0.4087 -0.7287 -0.6254
      (    7) (    8) (    8) (    9) (    7) (    5)
      S=0.119 S=0.196 S=0.189 S=0.137 S=0.032 S=0.130

CEOTH 99.0000 99.0000 -0.0303 -0.3267 -0.4959 99.0000
      (    7) (    8) (    8) (    9) (    7) (    5)
      S=***** S=***** S=0.472 S=0.195 S=0.129 S=*****

DRIVE  0.8755  0.6359  0.8794  0.4225  0.5990  0.1391
      (    7) (    8) (    8) (    9) (    7) (    5)
      S=0.005 S=0.045 S=0.002 S=0.129 S=0.078 S=0.412
```

```
 ORC03   ORC06   ORC09   ORC12   ORC15   ORC18

-0.6845  0.1819 -0.0905  0.3006  0.6522  0.5270
(    3) (    6) (    7) (    9) (    7) (    5)
S=0.260 S=0.365 S=0.424 S=0.216 S=0.056 S=0.181

-0.6845 -0.0443 -0.1786  0.1668  0.5461  0.5208
(    3) (    6) (    7) (    9) (    7) (    5)
S=0.260 S=0.467 S=0.351 S=0.334 S=0.102 S=0.184

99.0000  0.8738  0.4138  0.6461  0.3641  0.0953
(    3) (    6) (    7) (    9) (    7) (    5)
S=***** S=0.011 S=0.178 S=0.030 S=0.211 S=0.439

99.0000 99.0000  0.4873  0.3338  0.4846 99.0000
(    3) (    6) (    7) (    9) (    7) (    5)
S=***** S=***** S=0.134 S=0.190 S=0.135 S=*****

-0.1290 -0.4281  0.2215  0.0230  0.2775  0.1944
(    3) (    6) (    7) (    9) (    7) (    5)
S=0.456 S=0.199 S=0.317 S=0.477 S=0.273 S=0.377


 OCR     OCR     OCR     OCR     OCR     OCR

99.0000 99.0000 99.0000 99.0000 99.0000 99.0000
(    0) (    0) (    0) (    0) (    0) (    0)
S=***** S=***** S=***** S=***** S=***** S=*****

99.0000 99.0000 99.0000 99.0000 99.0000 99.0000
(    0) (    0) (    0) (    0) (    0) (    0)
S=***** S=***** S=***** S=***** S=***** S=*****

99.0000 99.0000 99.0000 99.0000 99.0000 99.0000
(    0) (    0) (    0) (    0) (    0) (    0)
S=***** S=***** S=***** S=***** S=***** S=*****

99.0000 99.0000 99.0000 99.0000 99.0000 99.0000
(    0) (    0) (    0) (    0) (    0) (    0)
S=***** S=***** S=***** S=***** S=***** S=*****

99.0000 99.0000 99.0000 99.0000 99.0000 99.0000
(    0) (    0) (    0) (    0) (    0) (    0)
S=***** S=***** S=***** S=***** S=***** S=*****


 OCT03   OCT06   OCT09   OCT12   OCT15   OCT18

 0.0962  0.5718  0.6855  0.0547 -0.6393 -0.9829
(    7) (    8) (    8) (    9) (    7) (    5)
S=0.419 S=0.069 S=0.030 S=0.444 S=0.061 S=0.001

 0.2872  0.6388  0.7531  0.1503 -0.5926 -0.9983
(    7) (    8) (    8) (    9) (    7) (    5)
S=0.266 S=0.044 S=0.016 S=0.350 S=0.080 S=0.001

-0.6717 -0.3399 -0.2171 -0.3033 -0.2972 -0.0560
(    7) (    8) (    8) (    9) (    7) (    5)
S=0.049 S=0.205 S=0.303 S=0.214 S=0.259 S=0.464

99.0000 99.0000 -0.0350 -0.2482 -0.0700 99.0000
(    7) (    8) (    8) (    9) (    7) (    5)
S=***** S=***** S=0.467 S=0.260 S=0.441 S=*****

 0.4517  0.5053  0.6809  0.5272  0.1495  0.4882
(    7) (    8) (    8) (    9) (    7) (    5)
S=0.154 S=0.101 S=0.032 S=0.072 S=0.374 S=0.202
```

<u>CE AND DRIVE vs. OUTCOMES</u>

NASA - Low IPR

```
        OAC03   OAC06   OAC09   OAC12   OAC15   OAC18             ORC03   ORC06   ORC09   ORC12   ORC15   ORC18

CETOT   0.2474  0.6440  0.5931  0.5764  0.5166  0.8550           -0.3210  0.5236  0.6178  0.5229  0.5681  0.6254
       (     7)(     9)(    10)(    10)(    10)(     7)         (     7)(     9)(    10)(    10)(    10)(     7)
       S=0.296 S=0.031 S=0.035 S=0.041 S=0.062 S=0.007          S=0.241 S=0.074 S=0.028 S=0.060 S=0.043 S=0.067

CETCH   0.2474  0.6440  0.5931  0.5846  0.4746  0.8755           -0.3210  0.5236  0.6178  0.5215  0.6025  0.5954
       (     7)(     9)(    10)(    10)(    10)(     7)         (     7)(     9)(    10)(    10)(    10)(     7)
       S=0.296 S=0.031 S=0.035 S=0.038 S=0.083 S=0.005          S=0.241 S=0.074 S=0.028 S=0.061 S=0.033 S=0.079

CEBUS  99.0000 99.0000 99.0000  0.0283  0.3570  0.3596          99.0000 99.0000 99.0000 -0.1565 -0.1423  0.8335
       (     7)(     9)(    10)(    10)(    10)(     7)         (     7)(     9)(    10)(    10)(    10)(     7)
       S=***** S=***** S=***** S=0.469 S=0.156 S=0.214          S=***** S=***** S=***** S=0.333 S=0.347 S=0.109

CEOTH  99.0000 99.0000 99.0000  0.0233  0.5275  0.7153          99.0000 99.0000 99.0000  0.5623  0.2191  0.5218
       (     7)(     9)(    10)(    10)(    10)(     7)         (     7)(     9)(    10)(    10)(    10)(     7)
       S=***** S=***** S=***** S=0.475 S=0.059 S=0.035          S=***** S=***** S=***** S=0.045 S=0.271 S=0.115

DRIVE   0.4822  0.0304 -0.4430 -0.5179 -0.2836 -0.0125          -0.4046 -0.1258  0.2536 -0.1681 -0.2219 -0.1092
       (     7)(     9)(    10)(    10)(    10)(     7)         (     7)(     9)(    10)(    10)(    10)(     7)
       S=0.137 S=0.469 S=0.100 S=0.063 S=0.214 S=0.489          S=0.184 S=0.370 S=0.240 S=0.321 S=0.269 S=0.408


        OSP03   OSP06   OSP09   OSP12   OSP15   OSP18             OCR     OCR     OCR     OCR     OCR     OCR

CETOT  -0.3035 -0.2411 -0.4254 -0.3103 -0.4335  0.5459          99.0000 99.0000 99.0000 99.0000 99.0000 99.0000
       (    10)(    10)(     9)(     9)(     8)(     6)         (     0)(     0)(     0)(     0)(     0)(     0)
       S=0.197 S=0.251 S=0.127 S=0.208 S=0.142 S=0.131          S=***** S=***** S=***** S=***** S=***** S=*****

CETCH  -0.3035 -0.2411 -0.4254 -0.3072 -0.4198  0.4446          99.0000 99.0000 99.0000 99.0000 99.0000 99.0000
       (    10)(    10)(     9)(     9)(     8)(     6)         (     0)(     0)(     0)(     0)(     0)(     0)
       S=0.197 S=0.251 S=0.127 S=0.211 S=0.150 S=0.189          S=***** S=***** S=***** S=***** S=***** S=*****

CEBUS  99.0000 99.0000 99.0000 -0.0850 -0.1823  0.8143          99.0000 99.0000 99.0000 99.0000 99.0000 99.0000
       (    10)(    10)(     9)(     9)(     8)(     6)         (     0)(     0)(     0)(     0)(     0)(     0)
       S=***** S=***** S=***** S=0.414 S=0.333 S=0.024          S=***** S=***** S=***** S=***** S=***** S=*****

CEOTH  99.0000 99.0000 99.0000 -0.1807 -0.2748  0.8961          99.0000 99.0000 99.0000 99.0000 99.0000 99.0000
       (    10)(    10)(     9)(     9)(     8)(     6)         (     0)(     0)(     0)(     0)(     0)(     0)
       S=***** S=***** S=***** S=0.321 S=0.255 S=0.008          S=***** S=***** S=***** S=***** S=***** S=*****

DRIVE  -0.1470 -0.0117 -0.2511  0.2009  0.0651 99.0000          99.0000 99.0000 99.0000 99.0000 99.0000 99.0000
       (    10)(    10)(     9)(     9)(     8)(     6)         (     0)(     0)(     0)(     0)(     0)(     0)
       S=0.343 S=0.487 S=0.257 S=0.302 S=0.421 S=*****          S=***** S=***** S=***** S=***** S=***** S=*****


        OCM03   OCM06   OCM09   OCM12   OCM15   OCM18             OCT03   OCT06   OCT09   OCT12   OCT15   OCT18

CETOT   0.2285 -0.3157  0.1203  0.3524  0.2463 -0.1757          -0.4221 -0.2916 -0.2708 -0.1074  0.1202  0.1854
       (     9)(    11)(    10)(    10)(     9)(     7)         (    10)(    12)(    11)(    11)(    10)(     7)
       S=0.277 S=0.172 S=0.370 S=0.159 S=0.261 S=0.353          S=0.112 S=0.179 S=0.210 S=0.377 S=0.370 S=0.345

CETCH   0.2285 -0.3157  0.1203  0.3525  0.2625 -0.1091          -0.4221 -0.2916 -0.2708 -0.0994  0.1445  0.2432
       (     9)(    11)(    10)(    10)(     9)(     7)         (    10)(    12)(    11)(    11)(    10)(     7)
       S=0.277 S=0.172 S=0.370 S=0.159 S=0.248 S=0.408          S=0.112 S=0.179 S=0.210 S=0.386 S=0.345 S=0.300

CEBUS  99.0000 99.0000 99.0000 -0.0765 -0.0762 -0.4259          99.0000 99.0000 99.0000 -0.0265 -0.0534 -0.1911
       (     9)(    11)(    10)(    10)(     9)(     7)         (    10)(    12)(    11)(    11)(    10)(     7)
       S=***** S=***** S=***** S=0.417 S=0.423 S=0.170          S=***** S=***** S=***** S=0.469 S=0.442 S=0.341

CEOTH  99.0000 99.0000 99.0000  0.3059  0.1057 -0.5556          99.0000 99.0000 99.0000 -0.3184 -0.2485 -0.1325
       (     9)(    11)(    10)(    10)(     9)(     7)         (    10)(    12)(    11)(    11)(    10)(     7)
       S=***** S=***** S=***** S=0.195 S=0.393 S=0.098          S=***** S=***** S=***** S=0.170 S=0.244 S=0.389

DRIVE   0.0628 -0.2963 -0.0539 -0.0371 -0.0762  0.2222          -0.1857 -0.1812  0.2098  0.3383  0.3130  0.3311
       (     9)(    11)(    10)(    10)(     9)(     7)         (    10)(    12)(    11)(    11)(    10)(     7)
       S=0.436 S=0.188 S=0.441 S=0.460 S=0.423 S=0.316          S=0.304 S=0.286 S=0.268 S=0.154 S=0.189 S=0.234
```

APPENDIX 4M

CE AND DRIVE vs. OUTCOMES

NASA - Mid IPR

```
        OAC03   OAC06   OAC09   OAC12   OAC15   OAC18

CETOT -0.4741 -0.1288  0.6678  0.8842  0.5816  0.7249
      (     7)(    12)(    12)(    11)(     8)(     6)
      S=0.141 S=0.345 S=0.009 S=0.001 S=0.065 S=0.052

CETCH -0.4903 -0.1330  0.6610  0.8805  0.6228  0.7455
      (     7)(    12)(    12)(    11)(     8)(     6)
      S=0.132 S=0.340 S=0.010 S=0.001 S=0.050 S=0.044

CEBUS 99.0000 -0.0052 -0.0280  0.5903  0.1735  0.4564
      (     7)(    12)(    12)(    11)(     8)(     6)
      S=***** S=0.494 S=0.466 S=0.028 S=0.341 S=0.181

CEOTH  0.7781  0.7760 99.0000 99.0000 99.0000  0.5258
      (     7)(    12)(    12)(    11)(     8)(     6)
      S=0.020 S=0.002 S=***** S=***** S=***** S=0.142

DRIVE -0.4622 -0.4693  0.0284 -0.3018  0.1734  0.4040
      (     7)(    12)(    12)(    11)(     8)(     6)
      S=0.148 S=0.062 S=0.465 S=0.184 S=0.341 S=0.213


        OSP03   OSP06   OSP09   OSP12   OSP15   OSP18

CETOT -0.5153 -0.3282 -0.2214  0.0397 -0.0675 -0.2173
      (     9)(    12)(    11)(    10)(     7)(     6)
      S=0.078 S=0.149 S=0.256 S=0.457 S=0.443 S=0.340

CETCH -0.5068 -0.4160 -0.2040  0.0499 -0.0192 -0.2304
      (     9)(    12)(    11)(    10)(     7)(     6)
      S=0.082 S=0.089 S=0.274 S=0.446 S=0.484 S=0.330

CEBUS 99.0000  0.9094 -0.1201 -0.0466 -0.3599 -0.0679
      (     9)(    12)(    11)(    10)(     7)(     6)
      S=***** S=0.001 S=0.363 S=0.449 S=0.214 S=0.434

CEOTH -0.1541 -0.0442 99.0000 99.0000 99.0000 -0.1994
      (     9)(    12)(    11)(    10)(     7)(     6)
      S=0.346 S=0.446 S=***** S=***** S=***** S=0.352

DRIVE -0.2927  0.2053  0.1899  0.2824  0.2454 -0.2547
      (     9)(    12)(    11)(    10)(     7)(     6)
      S=0.222 S=0.261 S=0.288 S=0.215 S=0.298 S=0.313


        OCM03   OCM06   OCM09   OCM12   OCM15   OCM18

       0.1795 -0.1538  0.6032 -0.2007 -0.4740 -0.8150
CETOT (     8)(    11)(    10)(    10)(     6)(     5)
      S=0.335 S=0.326 S=0.032 S=0.289 S=0.171 S=0.046

       0.1692 -0.1491  0.6326 -0.1750 -0.4627 -0.7532
CETCH (     8)(    11)(    10)(    10)(     6)(     5)
      S=0.344 S=0.331 S=0.025 S=0.314 S=0.178 S=0.071

      99.0000  0.0423 -0.4082 -0.3034 -0.4030 -0.8878
CEBUS (     8)(    11)(    10)(    10)(     6)(     5)
      S=***** S=0.451 S=0.121 S=0.197 S=0.214 S=0.022

       0.3419 -0.1456 99.0000 99.0000 99.0000 -0.3750
CEOTH (     8)(    11)(    10)(    10)(     6)(     5)
      S=0.204 S=0.335 S=***** S=***** S=***** S=0.267

      -0.2752 -0.5473 -0.6191 -0.7922 -1.0000 99.0000
DRIVE (     8)(    11)(    10)(    10)(     6)(     5)
      S=0.255 S=0.041 S=0.028 S=0.003 S=0.001 S=*****
```

APPENDIX 6N

```
  ORC03     ORC06     ORC09     ORC12     ORC15     ORC18

  0.6429    0.7173    0.6743    0.6064   -0.0316    0.1937
 (     7)  (    12)  (    12)  (    11)  (     8)  (     6)
 S=0.060   S=0.004   S=0.008   S=0.024   S=0.470   S=0.357

  0.6460    0.7166    0.6873    0.6391    0.0035    0.2391
 (     7)  (    12)  (    12)  (    11)  (     8)  (     6)
 S=0.059   S=0.004   S=0.007   S=0.017   S=0.497   S=0.324

 99.0000   -0.2324   -0.2323    0.1516   -0.2519    0.0533
 (     7)  (    12)  (    12)  (    11)  (     8)  (     6)
 S=*****   S=0.234   S=0.234   S=0.328   S=0.274   S=0.460

 -0.3731   -0.1648   99.0000   99.0000   99.0000    0.0564
 (     7)  (    12)  (    12)  (    11)  (     8)  (     6)
 S=0.205   S=0.283   S=*****   S=*****   S=*****   S=0.458

  0.8370   -0.0507   -0.4932   -0.5049   -0.5875   -0.4401
 (     7)  (    12)  (    12)  (    11)  (     8)  (     6)
 S=0.009   S=0.438   S=0.052   S=0.057   S=0.063   S=0.191


  OCR       OCR       OCR       OCR       OCR       OCR

 99.0000   99.0000   99.0000   99.0000   99.0000   99.0000
 (     0)  (     0)  (     0)  (     0)  (     0)  (     0)
 S=*****   S=*****   S=*****   S=*****   S=*****   S=*****

 99.0000   99.0000   99.0000   99.0000   99.0000   99.0000
 (     0)  (     0)  (     0)  (     0)  (     0)  (     0)
 S=*****   S=*****   S=*****   S=*****   S=*****   S=*****

 99.0000   99.0000   99.0000   99.0000   99.0000   99.0000
 (     0)  (     0)  (     0)  (     0)  (     0)  (     0)
 S=*****   S=*****   S=*****   S=*****   S=*****   S=*****

 99.0000   99.0000   99.0000   99.0000   99.0000   99.0000
 (     0)  (     0)  (     0)  (     0)  (     0)  (     0)
 S=*****   S=*****   S=*****   S=*****   S=*****   S=*****

 99.0000   99.0000   99.0000   99.0000   99.0000   99.0000
 (     0)  (     0)  (     0)  (     0)  (     0)  (     0)
 S=*****   S=*****   S=*****   S=*****   S=*****   S=*****


  OCT03     OCT06     OCT09     OCT12     OCT15     OCT18

 -0.2478    0.3733   -0.1184   -0.2475    0.0165    0.1970
 (     8)  (    11)  (    10)  (    10)  (     6)  (     5)
 S=0.277   S=0.129   S=0.372   S=0.245   S=0.488   S=0.375

 -0.2313    0.3594   -0.1158   -0.2797    0.0594    0.3096
 (     8)  (    11)  (    10)  (    10)  (     6)  (     5)
 S=0.291   S=0.139   S=0.375   S=0.217   S=0.455   S=0.306

 99.0000    0.0       0.0       0.0724   -0.2583   -0.2589
 (     8)  (    11)  (    10)  (    10)  (     6)  (     5)
 S=*****   S=0.500   S=0.500   S=0.421   S=0.311   S=0.337

 -0.5528   -0.3317   99.0000   99.0000   99.0000    0.1336
 (     8)  (    11)  (    10)  (    10)  (     6)  (     5)
 S=0.078   S=0.160   S=*****   S=*****   S=*****   S=0.415

 -0.3081   -0.2860   -0.3888   -0.3272   -0.7593   99.0000
 (     8)  (    11)  (    10)  (    10)  (     6)  (     5)
 S=0.229   S=0.197   S=0.133   S=0.178   S=0.040   S=*****
```

CE AND DRIVE vs. OUTCOMES

NASA -High IPR

```
       OAC03   OAC06   OAC09   OAC12   OAC15   OAC18          ORC03   ORC06   ORC09   ORC12   ORC15   ORC18

CETOT -0.0396  0.7855  0.4969  0.5617  0.2968  0.3104        -0.0700  0.5374  0.2144  0.4082  0.2201  0.0887
      (     7) (     9) (    11) (    11) (     7) (     5)  (     7) (     9) (    11) (    11) (     7) (     5)
      S=0.466 S=0.006 S=0.060 S=0.036 S=0.259 S=0.306        S=0.441 S=0.068 S=0.263 S=0.106 S=0.318 S=0.444

CETCH -0.0510  0.7797  0.4774  0.4894  0.3582  0.3802        -0.0877  0.5352  0.2113  0.3740  0.2666  0.0949
      (     7) (     9) (    11) (    11) (     7) (     5)  (     7) (     9) (    11) (    11) (     7) (     5)
      S=0.457 S=0.007 S=0.069 S=0.063 S=0.215 S=0.264        S=0.426 S=0.069 S=0.266 S=0.129 S=0.282 S=0.440

CEBUS  0.5568  0.1414  0.5525  0.5421 -0.5068 -0.2342         0.8640  0.0053  0.1419  0.3894 -0.3840  0.0076
      (     7) (     9) (    11) (    11) (     7) (     5)  (     7) (     9) (    11) (    11) (     7) (     5)
      S=0.097 S=0.358 S=0.039 S=0.042 S=0.123 S=0.352        S=0.006 S=0.495 S=0.339 S=0.118 S=0.198 S=0.495

CEOTH  0.5568 99.0000  0.1892  0.5333 99.0000 99.0000         0.8640 99.0000  0.1100  0.1199 99.0000 99.0000
      (     7) (     9) (    11) (    11) (     7) (     5)  (     7) (     9) (    11) (    11) (     7) (     5)
      S=0.097 S=***** S=0.289 S=0.046 S=***** S=*****        S=0.006 S=***** S=0.374 S=0.363 S=***** S=*****

DRIVE  0.4832  0.4160  0.3484 -0.0662 -0.0233 -0.4221         0.3729 -0.3585  0.3006 -0.2100 -0.2544 -0.4610
      (     5) (     7) (     9) (     9) (     6) (     5)  (     5) (     7) (     9) (     9) (     6) (     5)
      S=0.205 S=0.177 S=0.179 S=0.433 S=0.483 S=0.239        S=0.268 S=0.215 S=0.216 S=0.294 S=0.313 S=0.217


       OSP03   OSP06   OSP09   OSP12   OSP15   OSP18          OCR     OCR     OCR     OCR     OCR     OCR

CETOT -0.3370 -0.4505 -0.4587 -0.3637 -0.5765 -0.7583        99.0000 99.0000 99.0000 99.0000 99.0000 99.0000
      (    12) (    12) (    12) (    11) (     7) (     5)  (     0) (     0) (     0) (     0) (     0) (     0)
      S=0.142 S=0.071 S=0.067 S=0.122 S=0.088 S=0.069        S=***** S=***** S=***** S=***** S=***** S=*****

CETCH -0.3318 -0.4480 -0.4452 -0.3639 -0.5774 -0.7667        99.0000 99.0000 99.0000 99.0000 99.0000 99.0000
      (    12) (    12) (    12) (    11) (     7) (     5)  (     0) (     0) (     0) (     0) (     0) (     0)
      S=0.146 S=0.072 S=0.073 S=0.136 S=0.087 S=0.065        S=***** S=***** S=***** S=***** S=***** S=*****

CEBUS -0.0982 -0.2261 -0.3326 -0.2555 -0.0189 -0.3085        99.0000 99.0000 99.0000 99.0000 99.0000 99.0000
      (    12) (    12) (    12) (    11) (     7) (     5)  (     0) (     0) (     0) (     0) (     0) (     0)
      S=0.381 S=0.240 S=0.145 S=0.224 S=0.484 S=0.307        S=***** S=***** S=***** S=***** S=***** S=*****

CEOTH  0.0203 99.0000 -0.3004 -0.3161 99.0000 99.0000        99.0000 99.0000 99.0000 99.0000 99.0000 99.0000
      (    12) (    12) (    12) (    11) (     7) (     5)  (     0) (     0) (     0) (     0) (     0) (     0)
      S=0.475 S=***** S=0.171 S=0.172 S=***** S=*****        S=***** S=***** S=***** S=***** S=***** S=*****

DRIVE -0.2546  0.0268  0.2123  0.2169  0.2234  0.3241        99.0000 99.0000 99.0000 99.0000 99.0000 99.0000
      (     9) (    11) (    10) (     9) (     6) (     5)  (     0) (     0) (     0) (     0) (     0) (     0)
      S=0.254 S=0.471 S=0.278 S=0.288 S=0.335 S=0.297        S=***** S=***** S=***** S=***** S=***** S=*****


       OCM03   OCM06   OCM09   OCM12   OCM15   OCM18          OCT03   OCT06   OCT09   OCT12   OCT15   OCT18

CETOT  0.1161 -0.2226  0.3371 -0.0409  0.3121  0.2329        -0.1198 -0.0432  0.1712 -0.1481 -0.3448 -0.3863
      (    11) (    11) (    11) (    10) (     6) (     5)  (    12) (    12) (    12) (    11) (     7) (     5)
      S=0.367 S=0.255 S=0.155 S=0.455 S=0.274 S=0.353        S=0.355 S=0.447 S=0.297 S=0.332 S=0.224 S=0.260

CETCH  0.1096 -0.2366  0.3375 -0.0599  0.3722  0.3451        -0.1268 -0.0606  0.1458 -0.2405 -0.3163 -0.4135
      (    11) (    11) (    11) (    10) (     6) (     5)  (    12) (    12) (    12) (    11) (     7) (     5)
      S=0.374 S=0.242 S=0.155 S=0.435 S=0.234 S=0.285        S=0.347 S=0.426 S=0.326 S=0.238 S=0.245 S=0.244

CEBUS  0.1672  0.4534  0.0273 -0.1446 -0.4845 -0.5008         0.2704  0.6484  0.3434  0.0527 -0.2582 -0.0331
      (    11) (    11) (    11) (    10) (     6) (     5)  (    12) (    12) (    12) (    11) (     7) (     5)
      S=0.312 S=0.081 S=0.468 S=0.345 S=0.165 S=0.195        S=0.198 S=0.011 S=0.137 S=0.439 S=0.288 S=0.479

CEOTH -0.1614 99.0000  0.2911  0.7055 99.0000 99.0000        -0.4264 99.0000  0.3360  0.8821 99.0000 99.0000
      (    11) (    11) (    11) (    10) (     6) (     5)  (    12) (    12) (    12) (    11) (     7) (     5)
      S=0.318 S=***** S=0.193 S=0.011 S=***** S=*****        S=0.083 S=***** S=0.143 S=0.001 S=***** S=*****

DRIVE  0.2976 -0.0425  0.2781 -0.0982  0.2360  0.0250        -0.3793  0.2361  0.3017  0.3215  0.4587  0.1790
      (     9) (     9) (     9) (     8) (     5) (     5)  (     9) (    10) (    10) (     9) (     6) (     5)
      S=0.237 S=0.457 S=0.234 S=0.409 S=0.351 S=0.484        S=0.157 S=0.256 S=0.198 S=0.199 S=0.180 S=0.387
```

CE AND DRIVE vs. OUTCOMES

NASA - Low IFR

```
        OAC03    OAC06    OAC09    OAC12    OAC15    OAC18

CETOT  -0.4094  -0.2600   0.6092   0.5060   0.6782   0.5216
       (     7) (    14) (    13) (    13) (    10) (     6)
       S=0.181  S=0.185  S=0.014  S=0.039  S=0.016  S=0.144

CETCH  -0.4274  -0.2560   0.5985   0.4742   0.6539   0.5026
       (     7) (    14) (    13) (    13) (    10) (     6)
       S=0.169  S=0.188  S=0.015  S=0.051  S=0.020  S=0.155

CEBUS  99.0000  -0.0654  -0.0016   0.2570   0.3170   0.5131
       (     7) (    14) (    13) (    13) (    10) (     6)
       S=*****  S=0.412  S=0.498  S=0.198  S=0.186  S=0.149

CEOTH   0.7566   0.8381  99.0000  -0.0140   0.2426   0.4910
       (     7) (    14) (    13) (    13) (    10) (     6)
       S=0.024  S=0.001  S=*****  S=0.482  S=0.250  S=0.161

DRIVE  -0.3517  -0.3238  -0.1379  -0.2608  -0.1153  -0.5890
       (     7) (    13) (    12) (    12) (     9) (     5)
       S=0.22   S=0.14   S=0.335  S=0.266  S=0.384  S=0.148


        OSP03    OSP06    OSP09    OSP12    OSP15    OSP18

CETOT  -0.3588  -0.3067  -0.2942  -0.3569  -0.4752   0.8362
       (    11) (    12) (    10) (    10) (     7) (     5)
       S=0.139  S=0.166  S=0.205  S=0.156  S=0.141  S=0.039

CETCH  -0.3543  -0.4172  -0.2716  -0.3182  -0.4349   0.8023
       (    11) (    12) (    10) (    10) (     7) (     5)
       S=0.143  S=0.089  S=0.224  S=0.185  S=0.165  S=0.051

CEBUS  99.0000   0.9936  -0.1027  -0.1922  -0.2499   0.7539
       (    11) (    12) (    10) (    10) (     7) (     5)
       S=*****  S=0.001  S=0.389  S=0.297  S=0.294  S=0.054

CEOTH  -0.1225  -0.0519  99.0000  -0.1158  -0.2661   0.9781
       (    11) (    12) (    10) (    10) (     7) (     5)
       S=0.360  S=0.436  S=*****  S=0.375  S=0.282  S=0.002

DRIVE  -0.0912   0.3858   0.3826   0.3847   0.4578  -0.5774
       (    11) (    11) (     9) (     9) (     6) (     4)
       S=0.395  S=0.120  S=0.155  S=0.153  S=0.181  S=0.211


        OCM03    OCM06    OCM09    OCM12    OCM15    OCM18

CETOT   0.5895   0.3672   0.6526   0.6823   0.4369  -0.4788
       (    11) (    14) (    12) (    12) (     9) (     6)
       S=0.028  S=0.098  S=0.011  S=0.007  S=0.120  S=0.168

CETCH   0.5830   0.3690   0.6742   0.7001   0.4874  -0.3826
       (    11) (    14) (    12) (    12) (     9) (     6)
       S=0.030  S=0.097  S=0.008  S=0.006  S=0.092  S=0.227

CEBUS  99.0000  -0.1009  -0.3919  -0.3332  -0.3545  -0.8948
       (    11) (    14) (    12) (    12) (     9) (     6)
       S=*****  S=0.366  S=0.104  S=0.145  S=0.175  S=0.008

CEOTH   0.1604  -0.1009  99.0000   0.3296   0.2380  -0.6000
       (    11) (    14) (    12) (    12) (     9) (     6)
       S=0.319  S=0.366  S=*****  S=0.148  S=0.269  S=0.104

DRIVE   0.1427   0.1049  -0.3293  -0.3435  -0.2956  -0.0680
       (    11) (    13) (    11) (    11) (     8) (     5)
       S=0.339  S=0.367  S=0.162  S=0.151  S=0.239  S=0.457
```

APPENDIX 6P

```
 ORC03    ORC06    ORC09    ORC12    ORC15    ORC18

-0.4263   0.5182   0.5872   0.4729   0.3882   0.6478
(     7) (    14) (    13) (    13) (    10) (     6)
S=0.170  S=0.029  S=0.017  S=0.051  S=0.134  S=0.082

-0.4216   0.5262   0.6016   0.4637   0.4020   0.6398
(     7) (    14) (    13) (    13) (    10) (     6)
S=0.173  S=0.027  S=0.015  S=0.047  S=0.125  S=0.086

99.0000  -0.1861  -0.2819  -0.2021  -0.0781   0.5722
(     7) (    14) (    13) (    13) (    10) (     6)
S=*****  S=0.262  S=0.175  S=0.254  S=0.415  S=0.118

-0.0582  -0.1656  99.0000   0.2592   0.2459   0.4767
(     7) (    14) (    13) (    13) (    10) (     6)
S=0.451  S=0.286  S=*****  S=0.160  S=0.247  S=0.170

-0.5167  -0.4126  -0.6166  -0.5181  -0.4663  -0.5686
(     7) (    13) (    12) (    12) (     9) (     5)
S=0.119  S=0.081  S=0.016  S=0.042  S=0.103  S=0.159


 OCR      OCR      OCR      OCR      OCR      OCR

99.0000  99.0000  99.0000  99.0000  99.0000  99.0000
(     0) (     0) (     0) (     0) (     0) (     0)
S=*****  S=*****  S=*****  S=*****  S=*****  S=*****

99.0000  99.0000  99.0000  99.0000  99.0000  99.0000
(     0) (     0) (     0) (     0) (     0) (     0)
S=*****  S=*****  S=*****  S=*****  S=*****  S=*****

99.0000  99.0000  99.0000  99.0000  99.0000  99.0000
(     0) (     0) (     0) (     0) (     0) (     0)
S=*****  S=*****  S=*****  S=*****  S=*****  S=*****

99.0000  99.0000  99.0000  99.0000  99.0000  99.0000
(     0) (     0) (     0) (     0) (     0) (     0)
S=*****  S=*****  S=*****  S=*****  S=*****  S=*****

99.0000  99.0000  99.0000  99.0000  99.0000  99.0000
(     0) (     0) (     0) (     0) (     0) (     0)
S=*****  S=*****  S=*****  S=*****  S=*****  S=*****


 OCT03    OCT06    OCT09    OCT12    OCT15    OCT18

-0.1988   0.1159  -0.3082  -0.3374  -0.4939  -0.3180
(    11) (    14) (    12) (    12) (     9) (     6)
S=0.279  S=0.347  S=0.165  S=0.142  S=0.088  S=0.270

-0.1878   0.1296  -0.2827  -0.3231  -0.4645  -0.2666
(    11) (    14) (    12) (    12) (     9) (     6)
S=0.290  S=0.329  S=0.187  S=0.153  S=0.104  S=0.305

99.0000  -0.1020  -0.1956   0.0276  -0.2076  -0.5065
(    11) (    14) (    12) (    12) (     9) (     6)
S=*****  S=0.364  S=0.271  S=0.466  S=0.296  S=0.153

-0.4500  -0.3874  99.0000  -0.4279  -0.3649  -0.4889
(    11) (    14) (    12) (    12) (     9) (     6)
S=0.082  S=0.086  S=*****  S=0.083  S=0.167  S=0.163

 0.0341  -0.2013   0.0055   0.1823   0.0000  -0.2182
(    11) (    13) (    11) (    11) (     8) (     5)
S=0.46   S=0.255  S=0.494  S=0.296  S=0.500  S=0.362
```

CE AND DRIVE vs. OUTCOMES

NASA - Mid IFR

```
        OAC03     OAC06     OAC09     OAC12     OAC15     OAC18

CETOT  -0.3847    0.1509    0.6842    0.8056    0.5388    0.6554
       (     5)  (     8)  (    10)  (    11)  (    12)  (     9)
       S=0.261   S=0.361   S=0.015   S=0.001   S=0.035   S=0.028

CETCH  -0.3847    0.1760    0.7133    0.8275    0.4911    0.6657
       (     5)  (     8)  (    10)  (    11)  (    12)  (     9)
       S=0.261   S=0.338   S=0.010   S=0.001   S=0.052   S=0.025

CEBUS  99.0000   -0.1308   -0.0322    0.4070    0.3322   -0.1564
       (     5)  (     8)  (    10)  (    11)  (    12)  (     9)
       S=*****   S=0.379   S=0.465   S=0.107   S=0.146   S=0.344

CEOTH  99.0000   99.0000   -0.0322    0.0463    0.4694    0.4691
       (     5)  (     8)  (    10)  (    11)  (    12)  (     9)
       S=*****   S=*****   S=0.465   S=0.446   S=0.062   S=0.101

DRIVE  -0.5270   -0.0910   -0.0104    0.1163    0.2219    0.5976
       (     5)  (     7)  (     9)  (     9)  (    10)  (     8)
       S=0.181   S=0.423   S=0.490   S=0.383   S=0.269   S=0.059


        OSP03     OSP06     OSP09     OSP12     OSP15     OSP18

CETOT  -0.4256   -0.4320   -0.2776    0.7629   -0.1813   -0.2851
       (     6)  (    10)  (    10)  (    11)  (    11)  (     8)
       S=0.200   S=0.106   S=0.219   S=0.003   S=0.297   S=0.247

CETCH  -0.5066   -0.3935   -0.2631    0.7539   -0.1315   -0.2370
       (     6)  (    10)  (    10)  (    11)  (    11)  (     8)
       S=0.153   S=0.130   S=0.231   S=0.004   S=0.350   S=0.286

CEBUS   0.2000   -0.2083   -0.1198    0.6378   -0.2344   -0.1218
       (     6)  (    10)  (    10)  (    11)  (    11)  (     8)
       S=0.352   S=0.282   S=0.371   S=0.017   S=0.244   S=0.387

CEOTH  99.0000   99.0000   -0.1198   -0.1218   -0.1419   -0.1244
       (     6)  (    10)  (    10)  (    11)  (    11)  (     8)
       S=*****   S=*****   S=0.371   S=0.361   S=0.339   S=0.385

DRIVE  -0.6632    0.3478   -0.3392    0.3917    0.3540    0.3512
       (     6)  (     9)  (     9)  (    10)  (     9)  (     7)
       S=0.076   S=0.180   S=0.186   S=0.131   S=0.175   S=0.220


        OCM03     OCM06     OCM09     OCM12     OCM15     OCM18

CETOT  -0.6172   -0.4461   -0.1698   -0.4936   -0.5293   -0.2098
       (     6)  (    10)  (    10)  (    12)  (    11)  (     8)
       S=0.096   S=0.098   S=0.320   S=0.051   S=0.047   S=0.309

CETCH  -0.4544   -0.3910   -0.1156   -0.4567   -0.4097   -0.0648
       (     6)  (    10)  (    10)  (    12)  (    11)  (     8)
       S=0.183   S=0.132   S=0.375   S=0.068   S=0.105   S=0.439

CEBUS  -0.7006   -0.3260   -0.3180   -0.5602   -0.6033   -0.3339
       (     6)  (    10)  (    10)  (    12)  (    11)  (     8)
       S=0.061   S=0.179   S=0.185   S=0.029   S=0.025   S=0.209

CEOTH  99.0000   99.0000   -0.3180   -0.2075   -0.4038   -0.4364
       (     6)  (    10)  (    10)  (    12)  (    11)  (     8)
       S=*****   S=*****   S=0.185   S=0.259   S=0.109   S=0.140

DRIVE   0.3867   -0.0961    0.0987   -0.5762   -0.4122   -0.5150
       (     5)  (     8)  (     8)  (    10)  (     9)  (     7)
       S=0.264   S=0.410   S=0.408   S=0.041   S=0.135   S=0.118
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```
 ORC03     ORC06     ORC09     ORC12     ORC15     ORC18

  0.6803    0.6014    0.4621    0.5835    0.2954    0.3858
 (     5)  (     8)  (    10)  (    11)  (    12)  (     9)
 S=0.103   S=0.057   S=0.089   S=0.030   S=0.176   S=0.174

  0.6803    0.4658    0.3703    0.5447    0.3308    0.4247
 (     5)  (     8)  (    10)  (    11)  (    12)  (     9)
 S=0.103   S=0.122   S=0.146   S=0.042   S=0.147   S=0.127

 99.0000    0.6865    0.5412    0.6120   -0.0001   -0.2121
 (     5)  (     8)  (    10)  (    11)  (    12)  (     9)
 S=*****   S=0.030   S=0.053   S=0.023   S=0.500   S=0.292

 99.0000   99.0000    0.5412    0.2560    0.2104    0.0285
 (     5)  (     8)  (    10)  (    11)  (    12)  (     9)
 S=*****   S=*****   S=0.053   S=0.224   S=0.256   S=0.471

  0.8126   -0.4121   -0.3436    0.0771    0.3445    0.3940
 (     5)  (     7)  (     8)  (     9)  (    10)  (     8)
 S=0.047   S=0.179   S=0.202   S=0.422   S=0.165   S=0.167


 OCR       OCR       OCR       OCR       OCR       OCR

 99.0000   99.0000   99.0000   99.0000   99.0000   99.0000
 (     0)  (     0)  (     0)  (     0)  (     0)  (     0)
 S=*****   S=*****   S=*****   S=*****   S=*****   S=*****

 99.0000   99.0000   99.0000   99.0000   99.0000   99.0000
 (     0)  (     0)  (     0)  (     0)  (     0)  (     0)
 S=*****   S=*****   S=*****   S=*****   S=*****   S=*****

 99.0000   99.0000   99.0000   99.0000   99.0000   99.0000
 (     0)  (     0)  (     0)  (     0)  (     0)  (     0)
 S=*****   S=*****   S=*****   S=*****   S=*****   S=*****

 99.0000   99.0000   99.0000   99.0000   99.0000   99.0000
 (     0)  (     0)  (     0)  (     0)  (     0)  (     0)
 S=*****   S=*****   S=*****   S=*****   S=*****   S=*****

 99.0000   99.0000   99.0000   99.0000   99.0000   99.0000
 (     0)  (     0)  (     0)  (     0)  (     0)  (     0)
 S=*****   S=*****   S=*****   S=*****   S=*****   S=*****


 OCT03     OCT06     OCT09     OCT12     OCT15     OCT18

 -0.7737   -0.4116   -0.5003   -0.5653   -0.0374   -0.2526
 (     6)  (    10)  (    10)  (    12)  (    11)  (     8)
 S=0.036   S=0.119   S=0.070   S=0.028   S=0.457   S=0.273

 -0.5696   -0.3428   -0.4564   -0.5481    0.0374   -0.2140
 (     6)  (    10)  (    10)  (    12)  (    11)  (     8)
 S=0.119   S=0.166   S=0.092   S=0.033   S=0.457   S=0.305

 -0.8783   -0.3957   -0.3333   -0.4559   -0.2348   -0.1461
 (     6)  (    10)  (    10)  (    12)  (    11)  (     8)
 S=0.011   S=0.129   S=0.173   S=0.068   S=0.244   S=0.365

 99.0000   99.0000   -0.3333   -0.2697   -0.0803    0.0
 (     6)  (    10)  (    10)  (    12)  (    11)  (     8)
 S=*****   S=*****   S=0.173   S=0.198   S=0.407   S=0.500

  0.3440   -0.0837    0.0322   -0.5006   -0.6516   -0.9071
 (     5)  (     9)  (     8)  (    10)  (     9)  (     7)
 S=0.285   S=0.422   S=0.470   S=0.070   S=0.029   S=0.002
```

CE AND DRIVE vs. OUTCOMES

NASA -High IFR

APPENDIX 7A

```
         OAC03    OAC06    OAC09    OAC12    OAC15    OAC18          ORC03    ORC06    ORC09    ORC12    ORC15    ORC18

CETOT     0.1819   0.1779   0.3970   0.3887   0.4490   0.4086         0.0148  -0.1504   0.0740   0.3944   0.2088   0.1726
         (   21)  (   23)  (   26)  (   28)  (   31)  (   35)        (   21)  (   23)  (   26)  (   28)  (   31)  (   35)
         S=0.215  S=0.208  S=0.022  S=0.020  S=0.006  S=0.007        S=0.475  S=0.247  S=0.360  S=0.019  S=0.130  S=0.161

CETCH     0.3846   0.0865   0.3136   0.4101   0.3415  -0.0122         0.1482  -0.2320  -0.0479   0.4204   0.1513   0.1871
         (   21)  (   23)  (   26)  (   28)  (   31)  (   35)        (   21)  (   23)  (   26)  (   28)  (   31)  (   35)
         S=0.043  S=0.347  S=0.059  S=0.015  S=0.030  S=0.472        S=0.261  S=0.143  S=0.408  S=0.013  S=0.208  S=0.141

CEBUS     0.1724   0.3218   0.4146   0.2199   0.5208   0.6731        -0.1914   0.1041   0.0719   0.1825   0.2539   0.0318
         (   21)  (   23)  (   26)  (   28)  (   31)  (   35)        (   21)  (   23)  (   26)  (   28)  (   31)  (   35)
         S=0.227  S=0.067  S=0.018  S=0.130  S=0.001  S=0.001        S=0.203  S=0.318  S=0.364  S=0.176  S=0.084  S=0.428

CEOTH    -0.2212  -0.0129   0.2436   0.1154   0.4415   0.1187        -0.0060  -0.0168   0.1842   0.1584   0.2075   0.1837
         (   21)  (   23)  (   26)  (   28)  (   31)  (   35)        (   21)  (   23)  (   26)  (   28)  (   31)  (   35)
         S=0.168  S=0.477  S=0.115  S=0.279  S=0.006  S=0.248        S=0.490  S=0.470  S=0.184  S=0.210  S=0.131  S=0.145

DRIVE    -0.1743   0.4361   0.2825   0.3719  -0.2063  -0.2820         0.1593   0.0430   0.0308  -0.1540  -0.1237  -0.1980
         (   20)  (   22)  (   24)  (   27)  (   30)  (   33)        (   20)  (   22)  (   24)  (   27)  (   30)  (   33)
         S=0.231  S=0.021  S=0.391  S=0.029  S=0.137  S=0.056        S=0.251  S=0.425  S=0.443  S=0.222  S=0.257  S=0.135


         OSP03    OSP06    OSP09    OSP12    OSP15    OSP18          OCR      OCR      OCR      OCR      OCR      OCR

CETOT    -0.1892  -0.1074  -0.1138   0.1332   0.1564   0.2749         0.1320   0.1280   0.1007   0.1184   0.1443   0.1476
         (   37)  (   37)  (   37)  (   43)  (   47)  (   47)        (  103)  (  103)  (  103)  (  103)  (  103)  (  103)
         S=0.131  S=0.263  S=0.251  S=0.197  S=0.147  S=0.031        S=0.092  S=0.099  S=0.156  S=0.117  S=0.073  S=0.068

CETCH    -0.1427  -0.1079  -0.1137  -0.0278   0.0109   0.1885         0.0903   0.0952   0.0433   0.0496   0.0733   0.0554
         (   37)  (   37)  (   37)  (   43)  (   47)  (   47)        (  103)  (  103)  (  103)  (  103)  (  103)  (  103)
         S=0.200  S=0.262  S=0.251  S=0.430  S=0.471  S=0.102        S=0.182  S=0.169  S=0.332  S=0.309  S=0.231  S=0.289

CEBUS    -0.0763  -0.0149  -0.0667   0.3184   0.3149   0.2672         0.1670   0.1274   0.1685   0.1687   0.1769   0.2154
         (   37)  (   37)  (   37)  (   43)  (   47)  (   47)        (  103)  (  103)  (  103)  (  103)  (  103)  (  103)
         S=0.327  S=0.465  S=0.347  S=0.019  S=0.016  S=0.035        S=0.046  S=0.100  S=0.044  S=0.044  S=0.037  S=0.014

CEOTH    -0.0921  -0.0256  -0.0489   0.1072   0.0667  -0.0313         0.0494   0.0327   0.0497   0.0593   0.0969   0.0878
         (   37)  (   37)  (   37)  (   43)  (   47)  (   47)        (  103)  (  103)  (  103)  (  103)  (  103)  (  103)
         S=0.294  S=0.440  S=0.387  S=0.247  S=0.328  S=0.417        S=0.310  S=0.371  S=0.309  S=0.276  S=0.165  S=0.189

DRIVE     0.3491  -0.1145   0.1213  -0.1083   0.0959   0.0254         0.2729   0.2729   0.2729   0.2729   0.2729   0.2729
         (   32)  (   32)  (   32)  (   39)  (   43)  (   42)        (   92)  (   92)  (   92)  (   92)  (   92)  (   92)
         S=0.025  S=0.256  S=0.254  S=0.256  S=0.270  S=0.436        S=0.004  S=0.004  S=0.004  S=0.004  S=0.004  S=0.004


         OCM03    OCM06    OCM09    OCM12    OCM15    OCM18          OCT03    OCT06    OCT09    OCT12    OCT15    OCT18

CETOT     0.1198   0.1071  -0.1104  -0.2732  -0.1114  -0.3377        -0.0352   0.1383   0.0232  -0.1078  -0.0157  -0.1096
         (   38)  (   40)  (   39)  (   43)  (   49)  (   48)        (   39)  (   41)  (   39)  (   43)  (   49)  (   48)
         S=0.237  S=0.255  S=0.252  S=0.038  S=0.223  S=0.009        S=0.416  S=0.194  S=0.444  S=0.246  S=0.457  S=0.229

CETCH     0.0529   0.1280  -0.0160  -0.2152  -0.0665  -0.2592        -0.0647   0.0248  -0.0064  -0.0562  -0.0117  -0.1406
         (   38)  (   40)  (   39)  (   43)  (   49)  (   48)        (   39)  (   41)  (   39)  (   43)  (   49)  (   48)
         S=0.376  S=0.216  S=0.461  S=0.083  S=0.325  S=0.038        S=0.348  S=0.439  S=0.485  S=0.360  S=0.468  S=0.170

CEBUS    -0.0396   0.0370  -0.2681  -0.1977  -0.1466  -0.2925        -0.1958   0.2238  -0.0838  -0.1346   0.0047  -0.0464
         (   38)  (   40)  (   39)  (   43)  (   49)  (   48)        (   39)  (   41)  (   39)  (   43)  (   49)  (   48)
         S=0.407  S=0.410  S=0.049  S=0.102  S=0.157  S=0.022        S=0.116  S=0.080  S=0.306  S=0.195  S=0.487  S=0.377

CEOTH     0.2132  -0.0332  -0.1455  -0.2094  -0.0415  -0.0515         0.1952   0.1259   0.0891  -0.0508  -0.0425  -0.0146
         (   38)  (   40)  (   39)  (   43)  (   49)  (   48)        (   39)  (   41)  (   39)  (   43)  (   49)  (   48)
         S=0.099  S=0.419  S=0.188  S=0.089  S=0.388  S=0.364        S=0.117  S=0.216  S=0.295  S=0.373  S=0.386  S=0.461

DRIVE    -0.3534  -0.2443  -0.3069  -0.0884  -0.1529  -0.0350        -0.1442  -0.0570  -0.3201  -0.2994  -0.3320  -0.4525
         (   33)  (   35)  (   34)  (   39)  (   45)  (   43)        (   34)  (   35)  (   34)  (   39)  (   45)  (   43)
         S=0.019  S=0.079  S=0.039  S=0.296  S=0.158  S=0.412        S=0.208  S=0.371  S=0.032  S=0.032  S=0.013  S=0.001
```

CE AND DRIVE vs. OUTCOMES

FMC - All People

	OAC03	OAC06	OAC09	OAC12	OAC15	OAC18
CETOT	0.8205 (4) S=0.090	0.1559 (7) S=0.369	0.7479 (7) S=0.027	0.5118 (7) S=0.120	0.1197 (8) S=0.389	0.4624 (11) S=0.076
CETCH	0.6386 (4) S=0.181	0.1482 (7) S=0.376	0.7490 (7) S=0.026	0.5231 (7) S=0.114	-0.2585 (8) S=0.268	-0.2323 (11) S=0.246
CEBUS	99.0000 (4) S=******	0.2442 (7) S=0.299	-0.3167 (7) S=0.244	-0.4777 (7) S=0.139	0.8116 (8) S=0.007	0.7289 (11) S=0.005
CEOTH	0.7873 (4) S=0.106	99.0000 (7) S=******	99.0000 (7) S=******	99.0000 (7) S=******	99.0000 (8) S=******	0.7524 (11) S=0.004
DRIVE	-0.7474 (4) S=0.125	0.7948 (7) S=0.018	0.5830 (7) S=0.085	-0.6409 (7) S=0.060	-0.5741 (8) S=0.068	-0.6569 (11) S=0.014

ORC03	ORC06	ORC09	ORC12	ORC15	ORC18
-0.2176 (4) S=0.391	-0.2798 (7) S=0.272	-0.0383 (7) S=0.468	0.9177 (7) S=0.002	0.2120 (8) S=0.307	0.0756 (11) S=0.413
0.4118 (4) S=0.294	-0.2779 (7) S=0.273	-0.0376 (7) S=0.468	0.9215 (7) S=0.002	0.1689 (8) S=0.345	0.4119 (11) S=0.104
99.0000 (4) S=******	-0.0090 (7) S=0.492	-0.0553 (7) S=0.453	-0.1394 (7) S=0.383	0.1235 (8) S=0.385	-0.2622 (11) S=0.218
-0.4795 (4) S=0.260	99.0000 (7) S=******	99.0000 (7) S=******	99.0000 (7) S=******	99.0000 (8) S=******	0.3146 (11) S=0.173
0.6643 (4) S=0.168	0.7001 (7) S=0.040	0.8298 (7) S=0.010	-0.6121 (7) S=0.072	0.2134 (8) S=0.306	-0.0908 (11) S=0.395

	OSP03	OSP06	OSP09	OSP12	OSP15	OSP18
CETOT	-0.2679 (10) S=0.227	-0.2042 (12) S=0.262	-0.2793 (10) S=0.217	-0.1177 (11) S=0.365	-0.0946 (13) S=0.379	0.5730 (14) S=0.016
CETCH	-0.2457 (10) S=0.247	-0.1938 (12) S=0.273	-0.2804 (10) S=0.216	-0.1332 (11) S=0.348	-0.2613 (13) S=0.194	0.3352 (14) S=0.121
CEBUS	-0.1993 (10) S=0.291	-0.1613 (12) S=0.308	0.0803 (10) S=0.413	-0.0220 (11) S=0.474	0.1626 (13) S=0.298	0.6731 (14) S=0.004
CEOTH	-0.0567 (10) S=0.438	-0.1033 (12) S=0.375	99.0000 (10) S=******	-0.0765 (11) S=0.412	-0.0835 (13) S=0.393	-0.2833 (14) S=0.163
DRIVE	0.3978 (8) S=0.164	-0.2349 (10) S=0.257	0.1213 (9) S=0.378	-0.1594 (11) S=0.320	-0.2090 (13) S=0.247	-0.4288 (13) S=0.072

OCR	CCR	OCR	OCR	OCR	OCR
-0.1742 (21) S=0.225	-0.1993 (21) S=0.193	-0.3052 (21) S=0.089	-0.2393 (21) S=0.148	-0.1734 (21) S=0.226	-0.0936 (21) S=0.343
-0.1331 (21) S=0.283	-0.1402 (21) S=0.272	-0.3122 (21) S=0.084	-0.3173 (21) S=0.081	-0.2533 (21) S=0.134	-0.2567 (21) S=0.131
-0.0254 (21) S=0.457	-0.3431 (21) S=0.064	0.0561 (21) S=0.405	0.0883 (21) S=0.352	0.0951 (21) S=0.341	0.2416 (21) S=0.146
-0.3295 (21) S=0.072	-0.3667 (21) S=0.051	-0.3667 (21) S=0.051	-0.4080 (21) S=0.033	-0.4080 (21) S=0.033	-0.4224 (21) S=0.028
0.1655 (19) S=0.249	0.1656 (19) S=0.249	0.1655 (19) S=0.249	0.1656 (19) S=0.249	0.1656 (19) S=0.249	0.1656 (19) S=0.249

	OCM03	OCM06	OCM09	OCM12	OCM15	OCM18
CETOT	0.3196 (10) S=0.184	0.2816 (12) S=0.188	0.3318 (10) S=0.174	-0.1575 (10) S=0.332	-0.0061 (13) S=0.492	-0.2973 (14) S=0.151
CETCH	0.3277 (10) S=0.178	0.2984 (12) S=0.173	0.3395 (10) S=0.169	-0.1921 (10) S=0.297	-0.0817 (13) S=0.395	-0.3017 (14) S=0.147
CEBUS	-0.7904 (10) S=0.003	-0.3684 (12) S=0.119	-0.1961 (10) S=0.294	-0.0141 (10) S=0.485	0.0917 (13) S=0.383	-0.2486 (14) S=0.196
CEOTH	0.2485 (10) S=0.244	-0.3594 (12) S=0.126	99.0000 (10) S=******	-0.0273 (10) S=0.470	-0.1321 (13) S=0.334	-0.0750 (14) S=0.399
DRIVE	-0.6693 (8) S=0.035	-0.1619 (10) S=0.329	0.0927 (9) S=0.406	0.2707 (10) S=0.225	-0.1297 (13) S=0.336	0.4182 (13) S=0.077

OCT03	OCT06	OCT09	OCT12	OCT15	OCT18
0.1200 (10) S=0.371	0.5057 (12) S=0.047	0.5378 (10) S=0.054	0.0054 (10) S=0.494	0.1865 (13) S=0.271	0.0500 (14) S=0.433
0.1333 (10) S=0.357	0.5022 (12) S=0.048	0.5327 (10) S=0.056	0.0963 (10) S=0.396	0.1168 (13) S=0.352	0.2413 (14) S=0.203
-0.5209 (10) S=0.061	-0.0313 (12) S=0.462	-0.0400 (10) S=0.456	-0.0933 (10) S=0.399	0.1717 (13) S=0.287	-0.1039 (14) S=0.362
0.1111 (10) S=0.380	-0.0731 (12) S=0.411	99.0000 (10) S=******	-0.0995 (10) S=0.392	-0.2843 (13) S=0.173	0.3088 (14) S=0.141
-0.5018 (8) S=0.103	-0.0191 (10) S=0.479	-0.4891 (9) S=0.091	0.0676 (10) S=0.426	-0.3663 (13) S=0.109	-0.4003 (13) S=0.088

APPENDIX 7B

CE AND DRIVE vs. OUTCOMES

FMC - Masters

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         OAC03     OAC06     JAC09     OAC12     UAC15     OAC18               ORC03     ORC06     ORC09     ORC12     ORC15     ORC18

CETOT    0.1427    0.2126    0.3155    0.3804    0.4578    0.3810              0.2761   -0.1097    0.0873    0.2549    0.2798    0.2162
       (     17) (     16) (     19) (     21) (     23) (     24)           (     17) (     16) (     19) (     21) (     23) (     24)
       S=0.292   S=0.215   S=0.094   S=0.044   S=0.014   S=0.033             S=0.142   S=0.343   S=0.361   S=0.132   S=0.098   S=0.188

CETCH    0.4154    0.0108    0.1386    0.4227    0.3822    0.0781              0.3687   -0.2502   -0.0193    0.2254    0.1831    0.1429
       (     17) (     16) (     19) (     21) (     23) (     24)           (     17) (     16) (     19) (     21) (     23) (     24)
       S=0.049   S=0.484   S=0.286   S=0.028   S=0.036   S=0.358             S=0.073   S=0.175   S=0.469   S=0.163   S=0.202   S=0.253

CEBUS    0.1986    0.4812    0.5357    0.2193    0.4939    0.6571             -0.2669    0.1624    0.0013    0.2463    0.3521    0.1888
       (     17) (     16) (     19) (     21) (     23) (     24)           (     17) (     16) (     19) (     21) (     23) (     24)
       S=0.222   S=0.030   S=0.009   S=0.170   S=0.008   S=0.001             S=0.150   S=0.274   S=0.498   S=0.141   S=0.050   S=0.192

CEOTH   -0.3227    0.0304    0.2937    0.1036    0.4446   -0.0003              0.1724    0.0092    0.1695    0.2122    0.3095    0.1480
       (     17) (     16) (     19) (     21) (     23) (     24)           (     17) (     16) (     19) (     21) (     23) (     24)
       S=0.103   S=0.456   S=0.111   S=0.327   S=0.017   S=0.500             S=0.254   S=0.486   S=0.244   S=0.178   S=0.075   S=0.245

DRIVE   -0.0129    0.1994    0.1635    0.5052   -0.1132   -0.1334             -0.2952   -0.3265   -0.1245    0.0052   -0.3511   -0.2184
       (     16) (     15) (     17) (     20) (     22) (     22)           (     16) (     15) (     17) (     20) (     22) (     22)
       S=0.481   S=0.238   S=0.265   S=0.012   S=0.308   S=0.277             S=0.134   S=0.117   S=0.317   S=0.491   S=0.055   S=0.164
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         OSP03     OSP06     OSP09     USP12     OSP15     OSP18               OCR       OCR       OCR       OCR       OCR       OCR

CETOT   -0.1653   -0.0567   -0.1111    0.1969    0.2374    0.3558              0.2183    0.1992    0.1795    0.1988    0.2172    0.2081
       (     27) (     25) (     27) (     32) (     34) (     33)           (     82) (     82) (     82) (     82) (     82) (     82)
       S=0.177   S=0.394   S=0.291   S=0.140   S=0.088   S=0.011             S=0.024   S=0.036   S=0.053   S=0.037   S=0.025   S=0.030

CETCH   -0.1204   -0.1099   -0.1046   -0.0045    0.1118    0.1978              0.1645    0.1639    0.1489    0.1648    0.1818    0.1534
       (     27) (     25) (     27) (     32) (     34) (     33)           (     82) (     82) (     82) (     82) (     82) (     82)
       S=0.275   S=0.301   S=0.302   S=0.490   S=0.264   S=0.135             S=0.070   S=0.071   S=0.091   S=0.070   S=0.051   S=0.084

CEBUS   -0.0283    0.0902   -0.0925    0.6727    0.5609    0.4532              0.1829    0.1566    0.2035    0.2386    0.2416    0.2500
       (     27) (     25) (     27) (     32) (     34) (     33)           (     82) (     82) (     82) (     82) (     82) (     82)
       S=0.331   S=0.334   S=0.323   S=0.001   S=0.001   S=0.004             S=0.050   S=0.080   S=0.033   S=0.015   S=0.014   S=0.012

CEOTH   -0.1057    0.0011   -0.0620    0.1044    0.0537    0.0382              0.0822    0.0507    0.0652    0.0769    0.1156    0.1142
       (     27) (     25) (     27) (     32) (     34) (     33)           (     82) (     82) (     82) (     82) (     82) (     82)
       S=0.300   S=0.498   S=0.379   S=0.285   S=0.382   S=0.416             S=0.231   S=0.325   S=0.280   S=0.246   S=0.151   S=0.153

DRIVE    0.3572   -0.0041    0.1284   -0.1063    0.2038    0.1284              0.3058    0.3058    0.3058    0.3058    0.3058    0.3058
       (     24) (     22) (     23) (     28) (     30) (     29)           (     73) (     73) (     73) (     73) (     73) (     73)
       S=0.043   S=0.493   S=0.280   S=0.295   S=0.140   S=0.253             S=0.004   S=0.004   S=0.004   S=0.004   S=0.004   S=0.004
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         OCM03     OCM06     OCM09     OCM12     OCM15     OCM18               OCT03     OCT06     OCT09     OCT12     OCT15     OCT18

CETOT    0.0889    0.0371   -0.2075   -0.3258   -0.1270   -0.3924             -0.0783    0.0633   -0.0993   -0.1319   -0.0815   -0.3038
       (     28) (     28) (     29) (     33) (     36) (     34)           (     29) (     29) (     29) (     33) (     36) (     34)
       S=0.326   S=0.426   S=0.140   S=0.032   S=0.230   S=0.011             S=0.343   S=0.372   S=0.304   S=0.232   S=0.318   S=0.040

CETCH   -0.0468    0.0253   -0.1508   -0.2327   -0.0335   -0.2367             -0.1299   -0.0786   -0.1766   -0.0959   -0.0624   -0.3382
       (     28) (     28) (     29) (     33) (     36) (     34)           (     29) (     29) (     29) (     33) (     36) (     34)
       S=0.418   S=0.449   S=0.217   S=0.096   S=0.423   S=0.089             S=0.251   S=0.343   S=0.180   S=0.298   S=0.359   S=0.025

CEBUS    0.0558    0.0799   -0.2700   -0.4402   -0.3111   -0.3942             -0.1777    0.2262   -0.1456   -0.1881   -0.1043   -0.0213
       (     28) (     28) (     29) (     33) (     36) (     34)           (     29) (     29) (     29) (     33) (     36) (     34)
       S=0.389   S=0.343   S=0.078   S=0.005   S=0.032   S=0.011             S=0.178   S=0.119   S=0.225   S=0.147   S=0.272   S=0.452

CEOTH    0.2539   -0.0220   -0.1502   -0.2241   -0.0605   -0.0259              0.2083    0.1108    0.0780   -0.0618   -0.0634   -0.2949
       (     28) (     28) (     29) (     33) (     36) (     34)           (     29) (     29) (     29) (     33) (     36) (     34)
       S=0.096   S=0.456   S=0.218   S=0.105   S=0.363   S=0.442             S=0.139   S=0.284   S=0.344   S=0.366   S=0.357   S=0.045

DRIVE   -0.4034   -0.3342   -0.4593   -0.1632   -0.1593   -0.2699             -0.0642   -0.0281   -0.2450   -0.4098   -0.3113   -0.5085
       (     25) (     25) (     25) (     29) (     32) (     30)           (     25) (     25) (     25) (     29) (     32) (     30)
       S=0.023   S=0.051   S=0.010   S=0.199   S=0.192   S=0.075             S=0.378   S=0.446   S=0.117   S=0.014   S=0.041   S=0.002
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CE AND DRIVE vs. OUTCOMES

FMC - No Masters

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        OAC03    OAC06    OAC09    OAC12    OAC15    OAC18          ORC03    ORC06    ORC09    ORC12    ORC15    ORC18

CETOT   99.0000  99.0000  99.0000  99.0000  99.0000  -1.0000        99.0000  99.0000  99.0000  99.0000  99.0000  -1.0000
        (     0) (     1) (     0) (     0) (     0) (     2)        (     0) (     1) (     0) (     0) (     0) (     2)
        S=****** S=****** S=****** S=****** S=****** S=******        S=****** S=****** S=****** S=****** S=****** S=******

CETCH   99.0000  99.0000  99.0000  99.0000  99.0000  -1.0000        99.0000  99.0000  99.0000  99.0000  99.0000  -1.0000
        (     0) (     1) (     0) (     0) (     0) (     2)        (     0) (     1) (     0) (     0) (     0) (     2)
        S=****** S=****** S=****** S=****** S=****** S=******        S=****** S=****** S=****** S=****** S=****** S=******

CEBUS   99.0000  99.0000  99.0000  99.0000  99.0000  99.0000        99.0000  99.0000  99.0000  99.0000  99.0000  99.0000
        (     0) (     1) (     0) (     0) (     0) (     2)        (     0) (     1) (     0) (     0) (     0) (     2)
        S=****** S=****** S=****** S=****** S=****** S=******        S=****** S=****** S=****** S=****** S=****** S=******

CEOTH   99.0000  99.0000  99.0000  99.0000  99.0000  99.0000        99.0000  99.0000  99.0000  99.0000  99.0000  99.0000
        (     0) (     1) (     0) (     0) (     0) (     2)        (     0) (     1) (     0) (     0) (     0) (     2)
        S=****** S=****** S=****** S=****** S=****** S=******        S=****** S=****** S=****** S=****** S=****** S=******

DRIVE   99.0000  99.0000  99.0000  99.0000  99.0000  99.0000        99.0000  99.0000  99.0000  99.0000  99.0000  99.0000
        (     0) (     1) (     0) (     0) (     0) (     2)        (     0) (     1) (     0) (     0) (     0) (     2)
        S=****** S=****** S=****** S=****** S=****** S=******        S=****** S=****** S=****** S=****** S=****** S=******


        OSP03    OSP06    OSP09    OSP12    OSP15    OSP18          OCR      OCR      OCR      OCR      OCR      OCR

CETOT   99.0000  99.0000  99.0000  99.0000  99.0000  -1.0000        99.0000  99.0000  99.0000  99.0000  99.0000  99.0000
        (     0) (     1) (     0) (     1) (     1) (     2)        (     2) (     2) (     2) (     2) (     2) (     2)
        S=****** S=****** S=****** S=****** S=****** S=******        S=****** S=****** S=****** S=****** S=****** S=******

CETCH   99.0000  99.0000  99.0000  99.0000  99.0000  -1.0000        99.0000  99.0000  99.0000  99.0000  99.0000  99.0000
        (     0) (     1) (     0) (     1) (     1) (     2)        (     2) (     2) (     2) (     2) (     2) (     2)
        S=****** S=****** S=****** S=****** S=****** S=******        S=****** S=****** S=****** S=****** S=****** S=******

CEBUS   99.0000  99.0000  99.0000  99.0000  99.0000  99.0000        99.0000  99.0000  99.0000  99.0000  99.0000  99.0000
        (     0) (     1) (     0) (     1) (     1) (     2)        (     2) (     2) (     2) (     2) (     2) (     2)
        S=****** S=****** S=****** S=****** S=****** S=******        S=****** S=****** S=****** S=****** S=****** S=******

CEOTH   99.0000  99.0000  99.0000  99.0000  99.0000  99.0000        99.0000  99.0000  99.0000  99.0000  99.0000  99.0000
        (     0) (     1) (     0) (     1) (     1) (     2)        (     2) (     2) (     2) (     2) (     2) (     2)
        S=****** S=****** S=****** S=****** S=****** S=******        S=****** S=****** S=****** S=****** S=****** S=******

DRIVE   99.0000  99.0000  99.0000  99.0000  99.0000  99.0000        -1.0000  -1.0000  -1.0000  -1.0000  -1.0000  -1.0000
        (     0) (     1) (     0) (     1) (     1) (     2)        (     2) (     2) (     2) (     2) (     2) (     2)
        S=****** S=****** S=****** S=****** S=****** S=******        S=****** S=****** S=****** S=****** S=****** S=******


        OCM03    OCM06    OCM09    OCM12    OCM15    OCM18          OCT03    OCT06    OCT09    OCT12    OCT15    OCT18

CETOT   99.0000  99.0000  99.0000  99.0000  99.0000   1.0000        99.0000  99.0000  99.0000  99.0000  99.0000  99.0000
        (     0) (     1) (     0) (     0) (     1) (     2)        (     0) (     1) (     0) (     0) (     1) (     2)
        S=****** S=****** S=****** S=****** S=****** S=******        S=****** S=****** S=****** S=****** S=****** S=******

CETCH   99.0000  99.0000  99.0000  99.0000  99.0000   1.0000        99.0000  99.0000  99.0000  99.0000  99.0000  99.0000
        (     0) (     1) (     0) (     0) (     1) (     2)        (     0) (     1) (     0) (     0) (     1) (     2)
        S=****** S=****** S=****** S=****** S=****** S=******        S=****** S=****** S=****** S=****** S=****** S=******

CEBUS   99.0000  99.0000  99.0000  99.0000  99.0000  99.0000        99.0000  99.0000  99.0000  99.0000  99.0000  99.0000
        (     0) (     1) (     0) (     0) (     1) (     2)        (     0) (     1) (     0) (     0) (     1) (     2)
        S=****** S=****** S=****** S=****** S=****** S=******        S=****** S=****** S=****** S=****** S=****** S=******

CEOTH   99.0000  99.0000  99.0000  99.0000  99.0000  99.0000        99.0000  99.0000  99.0000  99.0000  99.0000  99.0000
        (     0) (     1) (     0) (     0) (     1) (     2)        (     0) (     1) (     0) (     0) (     1) (     2)
        S=****** S=****** S=****** S=****** S=****** S=******        S=****** S=****** S=****** S=****** S=****** S=******

DRIVE   99.0000  99.0000  99.0000  99.0000  99.0000  99.0000        99.0000  99.0000  99.0000  99.0000  99.0000  99.0000
        (     0) (     1) (     0) (     0) (     1) (     2)        (     0) (     1) (     0) (     0) (     1) (     2)
        S=****** S=****** S=****** S=****** S=****** S=******        S=****** S=****** S=****** S=****** S=****** S=******
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CE AND DRVIE vs. OUTCOMES

FMC - Doctorate

	OAC03	OAC06	OAC09	OAC12	OAC15	OAC18	ORC03	ORC06	ORC09	ORC12	ORC15	ORC18
CETOT	0.2105 (20) S=0.187	0.1278 (20) S=0.296	0.3644 (21) S=0.052	0.4027 (17) S=0.054	0.5821 (19) S=0.004	0.6402 (20) S=0.001	0.1337 (20) S=0.287	-0.1481 (20) S=0.267	0.0312 (21) S=0.447	0.4032 (17) S=0.054	0.2765 (19) S=0.126	0.2461 (20) S=0.148
CETCH	0.4054 (20) S=0.038	0.0184 (20) S=0.474	0.2779 (21) S=0.111	0.4506 (17) S=0.035	0.5738 (19) S=0.005	0.3090 (20) S=0.093	0.2473 (20) S=0.147	-0.2319 (20) S=0.163	-0.1452 (21) S=0.265	0.4230 (17) S=0.045	0.2054 (19) S=0.200	0.2320 (20) S=0.163
CEBUS	0.1865 (20) S=0.216	0.3691 (20) S=0.055	0.3813 (21) S=0.044	0.1659 (17) S=0.262	0.5140 (19) S=0.012	0.7417 (20) S=0.001	-0.1660 (20) S=0.242	0.1096 (20) S=0.323	0.1764 (21) S=0.222	0.1888 (17) S=0.234	0.3404 (19) S=0.077	0.1420 (20) S=0.275
CEOTH	-0.2131 (20) S=0.184	-0.0415 (20) S=0.431	0.2337 (21) S=0.154	0.0661 (17) S=0.401	0.5496 (19) S=0.007	0.4567 (20) S=0.021	0.0445 (20) S=0.426	-0.0152 (20) S=0.475	0.2090 (21) S=0.182	0.1972 (17) S=0.224	0.2823 (19) S=0.121	0.3041 (20) S=0.096
DRIVE	-0.1748 (19) S=0.237	0.3014 (19) S=0.105	0.1984 (20) S=0.201	0.3671 (17) S=0.074	-0.3039 (18) S=0.110	-0.3269 (18) S=0.093	0.1926 (19) S=0.213	0.0103 (19) S=0.483	-0.0669 (20) S=0.390	-0.2108 (17) S=0.208	-0.0971 (18) S=0.351	-0.3060 (18) S=0.108

	OSP03	OSP06	OSP09	OSP12	OSP15	OSP18	OCR	OCR	OCR	OCR	OCR	OCR
CETOT	-0.2326 (32) S=0.100	-0.0868 (28) S=0.330	-0.1369 (29) S=0.239	0.3168 (27) S=0.054	0.1028 (28) S=0.301	0.0759 (27) S=0.353	0.0870 (58) S=0.258	0.0827 (58) S=0.268	0.0423 (58) S=0.376	0.0513 (58) S=0.351	0.0732 (58) S=0.293	0.0717 (58) S=0.297
CETCH	-0.1615 (32) S=0.160	-0.1550 (28) S=0.215	-0.1432 (29) S=0.229	0.1394 (27) S=0.244	-0.0497 (28) S=0.401	-0.0290 (27) S=0.443	0.0399 (58) S=0.383	0.0424 (58) S=0.376	-0.0315 (58) S=0.407	-0.0433 (58) S=0.373	-0.0250 (58) S=0.426	-0.0487 (58) S=0.358
CEBUS	-0.0630 (32) S=0.366	0.1178 (28) S=0.275	0.2094 (29) S=0.138	0.3375 (27) S=0.043	0.2069 (28) S=0.145	0.1610 (27) S=0.211	0.2111 (58) S=0.056	0.1377 (58) S=0.151	0.1637 (58) S=0.110	0.1630 (58) S=0.111	0.1631 (58) S=0.111	0.2043 (58) S=0.062
CEOTH	-0.1096 (32) S=0.275	0.0232 (28) S=0.453	-0.1325 (29) S=0.247	0.5388 (27) S=0.002	0.1794 (28) S=0.181	-0.1753 (27) S=0.191	0.0212 (58) S=0.437	0.0149 (58) S=0.456	0.0339 (58) S=0.400	0.0432 (58) S=0.374	0.0777 (58) S=0.281	0.0662 (58) S=0.311
DRIVE	0.3867 (29) S=0.019	-0.0233 (25) S=0.456	0.1476 (26) S=0.236	-0.0264 (25) S=0.450	0.1842 (25) S=0.189	0.0326 (23) S=0.441	0.2076 (52) S=0.070	0.2076 (52) S=0.070	0.2076 (52) S=0.070	0.2076 (52) S=0.070	0.2076 (52) S=0.070	0.2076 (52) S=0.070

	OCM03	OCM06	OCM09	OCM12	OCM15	OCM18	OCT03	OCT06	OCT09	OCT12	OCT15	OCT18
CETOT	0.1276 (33) S=0.240	0.1064 (30) S=0.288	-0.1949 (30) S=0.151	-0.3163 (27) S=0.054	-0.0481 (29) S=0.402	-0.2473 (28) S=0.102	-0.0945 (34) S=0.298	0.1954 (31) S=0.146	-0.0019 (30) S=0.496	-0.1551 (27) S=0.220	-0.0169 (29) S=0.465	-0.0626 (28) S=0.376
CETCH	0.0501 (33) S=0.391	0.1286 (30) S=0.249	-0.0846 (30) S=0.328	-0.2955 (27) S=0.067	-0.0672 (29) S=0.364	-0.1602 (28) S=0.208	-0.1120 (34) S=0.264	0.0438 (31) S=0.408	-0.0470 (30) S=0.403	-0.1165 (27) S=0.281	-0.0683 (29) S=0.362	-0.1865 (28) S=0.171
CEBUS	-0.0125 (33) S=0.472	0.0551 (30) S=0.386	-0.3450 (30) S=0.031	-0.1371 (27) S=0.248	0.0382 (29) S=0.422	-0.2582 (28) S=0.092	-0.2709 (34) S=0.061	0.2986 (31) S=0.051	-0.1129 (30) S=0.276	-0.1345 (27) S=0.252	0.1034 (29) S=0.297	0.0007 (28) S=0.499
CEOTH	0.2197 (33) S=0.110	-0.0505 (30) S=0.395	-0.1951 (30) S=0.151	-0.2927 (27) S=0.069	-0.0962 (29) S=0.310	-0.1470 (28) S=0.228	0.2016 (34) S=0.126	0.1598 (31) S=0.195	0.1057 (30) S=0.289	-0.0744 (27) S=0.356	-0.0764 (29) S=0.347	0.1887 (28) S=0.168
DRIVE	-0.3774 (30) S=0.020	-0.2751 (27) S=0.082	-0.2989 (27) S=0.065	-0.1212 (25) S=0.282	-0.3814 (26) S=0.027	0.0387 (24) S=0.429	-0.1100 (31) S=0.278	0.0545 (28) S=0.391	-0.3246 (27) S=0.049	-0.4071 (25) S=0.022	-0.4848 (26) S=0.006	-0.5371 (24) S=0.003

CE AND DRIVE vs. OUTCOMES

FMC - Low Schools

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         OAC03    OAC06    OAC09    OAC12    OAC15    OAC18              ORC03    ORC06    ORC09    ORC12    ORC15    ORC18

CETOT  99.0000   1.0000   0.3646  -0.0125  -0.1503   0.3366            99.0000  -1.0000   0.4803   0.1802   0.2257   0.1845
       (     1) (     2) (     4) (     9) (    10) (    13)            (     1) (     2) (     4) (     9) (    10) (    13)
       S=****** S=****** S=0.318  S=0.487  S=0.339  S=0.130             S=****** S=****** S=0.260  S=0.321  S=0.262  S=0.273

CETCH  99.0000   1.0000  -0.1987  -0.2019  -0.3582  -0.1938            99.0000  -1.0000   0.8865   0.2922   0.3024   0.5091
       (     1) (     2) (     4) (     9) (    10) (    13)            (     1) (     2) (     4) (     9) (    10) (    13)
       S=****** S=****** S=0.401  S=0.301  S=0.155  S=0.263             S=****** S=****** S=0.057  S=0.223  S=0.198  S=0.038

CEBUS  99.0000   1.0000   0.9501   0.6362   0.7089   0.5871            99.0000  -1.0000  -0.7390  -0.2130  -0.1062  -0.2279
       (     1) (     2) (     4) (     9) (    10) (    13)            (     1) (     2) (     4) (     9) (    10) (    13)
       S=****** S=****** S=0.025  S=0.033  S=0.011  S=0.017             S=****** S=****** S=0.131  S=0.291  S=0.385  S=0.227

CEOTH  99.0000  99.0000   0.7031   0.4549  -0.3215  -0.0782            99.0000  99.0000   0.0977  -0.4325  -0.0415   0.1759
       (     1) (     2) (     4) (     9) (    10) (    13)            (     1) (     2) (     4) (     9) (    10) (    13)
       S=****** S=****** S=0.148  S=0.109  S=0.183  S=0.400             S=****** S=****** S=0.451  S=0.123  S=0.455  S=0.283

DRIVE  99.0000   1.0000  -0.5103  -0.0155  -0.1863  -0.3561            99.0000  -1.0000   0.4977   0.1211  -0.2869   0.0291
       (     1) (     2) (     3) (     8) (    10) (    13)            (     1) (     2) (     3) (     8) (    10) (    13)
       S=****** S=****** S=0.330  S=0.483  S=0.303  S=0.116             S=****** S=****** S=0.334  S=0.388  S=0.211  S=0.462


         OSP03    OSP06    OSP09    OSP12    OSP15    OSP18              OCR      OCR      OCR      OCR      OCR      OCR

CETOT  -0.3162  -0.3593  -0.5304   0.0218   0.0867   0.0190            -0.1494  -0.1896  -0.2427  -0.0083   0.0938   0.0840
       (     5) (     8) (     6) (    12) (    15) (    16)            (    19) (    19) (    19) (    19) (    19) (    19)
       S=0.302  S=0.191  S=0.140  S=0.473  S=0.379  S=0.472             S=0.271  S=0.218  S=0.158  S=0.487  S=0.351  S=0.366

CETCH   0.8069  -0.2237  -0.3261   0.1034  -0.2051  -0.1529            -0.0406  -0.0596  -0.1696   0.0269  -0.0060  -0.1034
       (     5) (     8) (     6) (    12) (    15) (    16)            (    19) (    19) (    19) (    19) (    19) (    19)
       S=0.049  S=0.297  S=0.264  S=0.375  S=0.232  S=0.286             S=0.434  S=0.404  S=0.244  S=0.456  S=0.490  S=0.337

CEBUS  -0.6723  -0.3218  -0.2823  -0.1187   0.6511   0.2991            -0.1828  -0.2191  -0.0638   0.0421   0.1432   0.2686
       (     5) (     8) (     6) (    12) (    15) (    16)            (    19) (    19) (    19) (    19) (    19) (    19)
       S=0.107  S=0.218  S=0.294  S=0.357  S=0.004  S=0.130             S=0.227  S=0.184  S=0.398  S=0.432  S=0.279  S=0.133

CEOTH  99.0000  -0.2925  -0.5616  -0.2725  -0.3282  -0.2835            99.0000  -0.3757  -0.3757  -0.3757   0.1269   0.0590
       (     5) (     8) (     6) (    12) (    15) (    16)            (    19) (    19) (    19) (    19) (    19) (    19)
       S=****** S=0.241  S=0.123  S=0.196  S=0.116  S=0.144             S=****** S=0.056  S=0.056  S=0.056  S=0.302  S=0.405

DRIVE  -0.4931  -0.4778   0.3706  -0.7272  -0.4303  -0.2558             0.2433   0.2433   0.2433   0.2433   0.2433   0.2433
       (     3) (     6) (     5) (    11) (    15) (    16)            (    17) (    17) (    17) (    17) (    17) (    17)
       S=0.148  S=0.169  S=0.270  S=0.006  S=0.055  S=0.170             S=0.173  S=0.173  S=0.173  S=0.173  S=0.173  S=0.173


         OCM03    OCM06    OCM09    OCM12    OCM15    OCM18              OCT03    OCT06    OCT09    OCT12    OCT15    OCT18

CETOT  -0.3000   0.1886   0.7539   0.1945  -0.1715  -0.4220             0.7442   0.2517   0.9246   0.7229   0.4436   0.0463
       (     5) (     9) (     7) (    12) (    16) (    16)            (     5) (     9) (     7) (    12) (    16) (    16)
       S=0.312  S=0.314  S=0.025  S=0.272  S=0.263  S=0.052             S=0.075  S=0.257  S=0.001  S=0.004  S=0.043  S=0.432

CETCH   0.6124   0.2172   0.7418   0.3287   0.0039  -0.2843             0.2532   0.1169   0.7936   0.5769   0.5005   0.1642
       (     5) (     9) (     7) (    12) (    16) (    16)            (     5) (     9) (     7) (    12) (    16) (    16)
       S=0.136  S=0.287  S=0.028  S=0.146  S=0.494  S=0.143             S=0.341  S=0.382  S=0.017  S=0.025  S=0.024  S=0.272

CEBUS  -0.5669  -0.1599   0.0748  -0.4617  -0.5665  -0.2947             0.5860   0.1305   0.2369   0.2612  -0.2517  -0.1174
       (     5) (     9) (     7) (    12) (    16) (    16)            (     5) (     9) (     7) (    12) (    16) (    16)
       S=0.159  S=0.341  S=0.437  S=0.065  S=0.011  S=0.134             S=0.150  S=0.369  S=0.305  S=0.206  S=0.174  S=0.332

CEOTH  99.0000   0.3062   0.6015   0.2909   0.6023   0.2625            99.0000   0.5875   0.8433   0.4341   0.4272  -0.2468
       (     5) (     9) (     7) (    12) (    16) (    16)            (     5) (     9) (     7) (    12) (    16) (    16)
       S=****** S=0.211  S=0.077  S=0.179  S=0.007  S=0.163             S=****** S=0.048  S=0.009  S=0.079  S=0.049  S=0.178

DRIVE  -0.5485   0.2160  -0.2214   0.5796   0.5128   0.1545            -0.0571   0.1124   0.3402   0.3469   0.1736  -0.0902
       (     3) (     7) (     6) (    11) (    16) (    16)            (     3) (     7) (     6) (    11) (    16) (    16)
       S=0.315  S=0.321  S=0.337  S=0.031  S=0.021  S=0.284             S=0.482  S=0.405  S=0.255  S=0.148  S=0.260  S=0.370
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CE AND DRIVE vs. OUTCOMES

FMC - Top Schools

	OAC03	OAC06	OAC09	OAC12	OAC15	OAC18
CETOT	-0.2478 (9) S=0.260	0.1767 (10) S=0.313	0.2973 (13) S=0.162	0.1586 (10) S=0.331	0.4317 (9) S=0.123	0.6819 (11) S=0.010
CETCH	0.0261 (9) S=0.473	0.1472 (10) S=0.342	0.2460 (13) S=0.209	0.1323 (10) S=0.358	0.3506 (9) S=0.177	0.5848 (11) S=0.029
CEBUS	-0.0453 (9) S=0.454	0.7305 (10) S=0.008	0.3822 (13) S=0.099	0.3527 (10) S=0.159	0.6209 (9) S=0.037	0.8757 (11) S=0.001
CEOTH	-0.2658 (9) S=0.245	-0.3330 (10) S=0.174	0.2688 (13) S=0.187	0.1434 (10) S=0.346	-0.4384 (9) S=0.119	-0.4130 (11) S=0.103
DRIVE	-0.5430 (8) S=0.082	0.0637 (9) S=0.433	-0.0450 (11) S=0.448	0.3775 (9) S=0.158	-0.0782 (9) S=0.421	-0.2658 (10) S=0.229

ORC03	ORC06	ORC09	ORC12	ORC15	ORC18
-0.1115 (9) S=0.388	-0.1445 (10) S=0.345	0.3924 (13) S=0.092	0.7338 (10) S=0.008	0.1425 (9) S=0.357	0.2845 (11) S=0.216
0.2159 (9) S=0.288	-0.0468 (10) S=0.449	0.7089 (13) S=0.003	0.7472 (10) S=0.006	0.0699 (9) S=0.429	0.2651 (11) S=0.215
-0.2508 (9) S=0.258	0.0140 (10) S=0.485	0.0516 (13) S=0.434	-0.2374 (10) S=0.254	0.2360 (9) S=0.270	0.1738 (11) S=0.305
-0.0620 (9) S=0.437	-0.2030 (10) S=0.287	0.2775 (13) S=0.179	-0.4303 (10) S=0.107	0.0123 (9) S=0.487	0.1284 (11) S=0.353
0.7600 (8) S=0.014	-0.5529 (9) S=0.051	0.2693 (11) S=0.212	-0.1398 (9) S=0.360	-0.3817 (9) S=0.155	-0.3125 (10) S=0.190

	OSP03	OSP06	OSP09	OSP12	OSP15	OSP18
CETOT	-0.2223 (17) S=0.196	0.0948 (17) S=0.359	-0.2187 (17) S=0.199	-0.0768 (17) S=0.385	-0.2301 (16) S=0.196	0.0817 (13) S=0.395
CETCH	-0.1360 (17) S=0.301	-0.0353 (17) S=0.447	-0.1879 (17) S=0.235	-0.1444 (17) S=0.290	-0.2633 (16) S=0.162	-0.0417 (13) S=0.446
CEBUS	-0.1222 (17) S=0.320	0.1944 (17) S=0.227	0.1061 (17) S=0.343	0.4458 (17) S=0.036	0.4082 (16) S=0.058	0.4372 (13) S=0.068
CEOTH	-0.1458 (17) S=0.288	0.0468 (17) S=0.429	-0.2023 (17) S=0.218	-0.0183 (17) S=0.472	-0.2791 (16) S=0.148	-0.1563 (13) S=0.305
DRIVE	0.4929 (14) S=0.037	0.0236 (14) S=0.472	0.0526 (14) S=0.429	-0.1339 (15) S=0.317	-0.0672 (15) S=0.406	-0.0371 (12) S=0.454

OCR	OCR	OCR	OCR	OCR	OCR
0.1057 (29) S=0.293	0.1598 (29) S=0.204	0.1266 (29) S=0.256	0.1310 (29) S=0.249	0.1131 (29) S=0.280	0.0653 (29) S=0.368
0.0342 (29) S=0.430	0.0717 (29) S=0.356	0.0571 (29) S=0.384	0.0554 (29) S=0.388	0.0381 (29) S=0.422	-0.0282 (29) S=0.442
0.1829 (29) S=0.171	0.1939 (29) S=0.157	0.1822 (29) S=0.172	0.2100 (29) S=0.137	0.1633 (29) S=0.199	0.1405 (29) S=0.234
0.0779 (29) S=0.344	0.0655 (29) S=0.368	0.0631 (29) S=0.373	0.0637 (29) S=0.371	0.0751 (29) S=0.349	0.0755 (29) S=0.349
0.2607 (25) S=0.104	0.2607 (25) S=0.104	0.2607 (25) S=0.104	0.2607 (25) S=0.104	0.2607 (25) S=0.104	0.2607 (25) S=0.104

	OCM03	OCM06	OCM09	OCM12	OCM15	OCM18
CETOT	0.3371 (17) S=0.093	0.0839 (17) S=0.374	-0.2441 (17) S=0.173	-0.2137 (16) S=0.213	-0.1588 (16) S=0.279	-0.6743 (13) S=0.006
CETCH	0.2399 (17) S=0.177	0.0977 (17) S=0.355	-0.1147 (17) S=0.331	-0.1343 (16) S=0.310	-0.1527 (16) S=0.286	-0.5416 (13) S=0.028
CEBUS	-0.0462 (17) S=0.430	0.1071 (17) S=0.341	-0.4508 (17) S=0.035	-0.5230 (16) S=0.019	-0.3350 (16) S=0.102	-0.7145 (13) S=0.003
CEOTH	0.2687 (17) S=0.148	-0.0352 (17) S=0.447	-0.2120 (17) S=0.207	0.1202 (16) S=0.329	0.6248 (16) S=0.005	0.1192 (13) S=0.349
DRIVE	-0.3926 (14) S=0.082	-0.2672 (14) S=0.178	-0.3504 (14) S=0.110	-0.0961 (14) S=0.372	0.1804 (15) S=0.260	0.0051 (12) S=0.494

OCT03	OCT06	OCT09	OCT12	OCT15	OCT18
0.0390 (17) S=0.441	0.2642 (17) S=0.153	0.0616 (17) S=0.407	-0.1832 (16) S=0.248	-0.0966 (16) S=0.361	-0.4066 (13) S=0.084
-0.0755 (17) S=0.387	-0.0018 (17) S=0.497	-0.0261 (17) S=0.460	-0.1511 (16) S=0.288	-0.0690 (16) S=0.400	-0.3282 (13) S=0.137
-0.0720 (17) S=0.392	0.3500 (17) S=0.084	-0.1266 (17) S=0.314	-0.2031 (16) S=0.225	-0.3864 (16) S=0.070	-0.2865 (13) S=0.171
0.2469 (17) S=0.170	0.1790 (17) S=0.246	0.1369 (17) S=0.300	0.0482 (16) S=0.430	0.3952 (16) S=0.065	-0.3556 (13) S=0.117
-0.1543 (14) S=0.299	-0.0934 (14) S=0.369	-0.3817 (14) S=0.089	-0.2190 (14) S=0.226	-0.0000 (15) S=0.500	-0.6845 (12) S=0.007

APPENDIX 7G

CE AND DRIVE vs. OUT COMES

FMC - Low GPA

```
        OAC03   OAC06   OAC09   OAC12   OAC15   OAC18

CETOT   0.6474 -0.0542  0.2178  0.6522 -0.1093  0.7952
       (     8)(     7)(     6)(     4)(     6)(     6)
       S=0.041 S=0.454 S=0.339 S=0.174 S=0.418 S=0.029

CETCH   0.6137 -0.0671  0.2037  0.6576 -0.3083  0.3863
       (     8)(     7)(     6)(     4)(     6)(     6)
       S=0.053 S=0.443 S=0.349 S=0.171 S=0.276 S=0.225

CEBUS  99.0000  0.7573  0.0170 -0.1792 -0.0590  0.7996
       (     8)(     7)(     6)(     4)(     6)(     6)
       S=***** S=0.024 S=0.487 S=0.410 S=0.456 S=0.028

CEOTH   0.3143 99.0000 99.0000 99.0000 99.0000 99.0000
       (     8)(     7)(     6)(     4)(     6)(     6)
       S=0.224 S=***** S=***** S=***** S=***** S=*****

DRIVE  -0.2389  0.0876  0.3794  0.8405 -0.7096 -0.2213
       (     8)(     7)(     6)(     4)(     5)(     5)
       S=0.244 S=0.426 S=0.229 S=0.080 S=0.090 S=0.360


        OSP03   OSP06   OSP09   OSP12   OSP15   OSP18

CETOT  -0.3778 -0.2029 -0.3058 -0.0735  0.2346  0.4388
       (    14)(    10)(     9)(     8)(    11)(    13)
       S=0.091 S=0.287 S=0.212 S=0.431 S=0.244 S=0.067

CETCH  -0.3669 -0.1995 -0.2833 -0.2260  0.1773  0.3872
       (    14)(    10)(     9)(     8)(    11)(    13)
       S=0.098 S=0.290 S=0.230 S=0.295 S=0.301 S=0.096

CEBUS  -0.1602 -0.1948 -0.1949  0.1653  0.2461  0.4459
       (    14)(    10)(     9)(     8)(    11)(    13)
       S=0.292 S=0.295 S=0.308 S=0.330 S=0.233 S=0.061

CEOTH  -0.1602 99.0000 99.0000 99.0000 99.0000 -0.1910
       (    14)(    10)(     9)(     8)(    11)(    13)
       S=0.292 S=***** S=***** S=***** S=***** S=0.266

DRIVE   0.3775 -0.0538  0.1241 -0.0182  0.0687 -0.1737
       (    13)(     9)(     7)(     7)(     9)(    10)
       S=0.102 S=0.443 S=0.395 S=0.485 S=0.430 S=0.316


        OCM03   OCM06   OCM09   OCM12   OCM15   OCM18

CETOT   0.1047  0.3511  0.0992 -0.1999 -0.1174 -0.3606
       (    14)(    11)(    11)(     9)(    13)(    14)
       S=0.361 S=0.145 S=0.386 S=0.303 S=0.351 S=0.103

CETCH   0.1049  0.3530  0.1326 -0.2508  0.0065 -0.2813
       (    14)(    11)(    11)(     9)(    13)(    14)
       S=0.361 S=0.143 S=0.349 S=0.258 S=0.492 S=0.165

CEBUS  -0.0248 -0.1336 -0.4462  0.0191 -0.1580 -0.3849
       (    14)(    11)(    11)(     9)(    13)(    14)
       S=0.466 S=0.348 S=0.084 S=0.481 S=0.303 S=0.087

CEOTH  -0.0248 99.0000 99.0000 99.0000 99.0000  0.0805
       (    14)(    11)(    11)(     9)(    13)(    14)
       S=0.466 S=***** S=***** S=***** S=***** S=0.392

DRIVE  -0.4335 -0.0102 -0.1054 -0.4126 -0.2761  0.3573
       (    13)(    10)(     9)(     8)(    11)(    11)
       S=0.069 S=0.489 S=0.394 S=0.155 S=0.206 S=0.140
```

```
 ORC03   ORC06   ORC09   ORC12   ORC15   ORC18

 0.8494 -0.1932 -0.4424 -0.6227 -0.1154  0.6017
(     8)(     7)(     6)(     4)(     6)(     6)
S=0.004 S=0.339 S=0.190 S=0.189 S=0.414 S=0.103

 0.8360 -0.1972 -0.4698 -0.6661 -0.4331  0.0132
(     8)(     7)(     6)(     4)(     6)(     6)
S=0.005 S=0.336 S=0.174 S=0.167 S=0.196 S=0.490

99.0000  0.2632  0.6306  0.5233 -0.0434  0.6919
(     8)(     7)(     6)(     4)(     6)(     6)
S=***** S=0.284 S=0.090 S=0.238 S=0.467 S=0.064

-0.0596 99.0000 99.0000 99.0000 99.0000 99.0000
(     8)(     7)(     6)(     4)(     6)(     6)
S=0.444 S=***** S=***** S=***** S=***** S=*****

-0.3238  0.3045  0.1634 -0.8246  0.9031  0.1810
(     8)(     7)(     6)(     4)(     5)(     5)
S=0.217 S=0.253 S=0.379 S=0.088 S=0.018 S=0.385


 OCR     OCR     OCR     OCR     OCR     OCR

-0.0269 -0.0049 -0.1137 -0.0420  0.0120  0.0434
(    24)(    24)(    24)(    24)(    24)(    24)
S=0.450 S=0.491 S=0.298 S=0.423 S=0.478 S=0.420

-0.0315 -0.0050 -0.1695 -0.1483 -0.1207 -0.1149
(    24)(    24)(    24)(    24)(    24)(    24)
S=0.442 S=0.491 S=0.214 S=0.245 S=0.287 S=0.296

-0.1144 -0.1144  0.1428  0.1472  0.1988  0.2445
(    24)(    24)(    24)(    24)(    24)(    24)
S=0.297 S=0.297 S=0.253 S=0.246 S=0.176 S=0.125

 0.1858  0.1030  0.1030  0.1030  0.1030 -0.0648
(    24)(    24)(    24)(    24)(    24)(    24)
S=0.192 S=0.316 S=0.316 S=0.316 S=0.316 S=0.382

 0.1606  0.1606  0.1606  0.1606  0.1606  0.1606
(    22)(    22)(    22)(    22)(    22)(    22)
S=0.238 S=0.238 S=0.238 S=0.238 S=0.238 S=0.238


 OCT03   OCT06   OCT09   OCT12   OCT15   OCT18

 0.2403  0.3127  0.1367 -0.1255  0.1389 -0.1882
(    15)(    12)(    11)(     9)(    13)(    14)
S=0.194 S=0.161 S=0.344 S=0.374 S=0.325 S=0.260

 0.2396  0.3163  0.1254 -0.1195 -0.0699 -0.3575
(    15)(    12)(    11)(     9)(    13)(    14)
S=0.195 S=0.158 S=0.357 S=0.380 S=0.410 S=0.105

-0.3948 -0.2335  0.1195 -0.0374  0.2096 -0.0881
(    15)(    12)(    11)(     9)(    13)(    14)
S=0.073 S=0.233 S=0.363 S=0.462 S=0.246 S=0.382

 0.0987 99.0000 99.0000 99.0000 99.0000 -0.3774
(    15)(    12)(    11)(     9)(    13)(    14)
S=0.363 S=***** S=***** S=***** S=***** S=0.092

-0.1715 -0.1771 -0.3872 -0.3051 -0.3947 -0.0828
(    14)(    11)(     9)(     8)(    11)(    11)
S=0.279 S=0.301 S=0.152 S=0.231 S=0.115 S=0.404
```

CE AND DRIVE vs. OUTCOMES

FMC - Mid GPA

```
         OAC03     OAC06     OAC09     OAC12     OAC15     OAC18

CETOT   0.8413    0.4031    0.6060    0.5589    0.8321    0.4026
        (    4)   (    4)   (    5)   (   10)   (   12)   (   15)
        S=0.079   S=0.298   S=0.139   S=0.047   S=0.001   S=0.068

CETCH   0.9859    0.4031    0.6060    0.5380    0.7714   -0.1403
        (    4)   (    4)   (    5)   (   10)   (   12)   (   15)
        S=0.007   S=0.298   S=0.139   S=0.054   S=0.002   S=0.309

CEBUS   0.7845   99.0000   99.0000    0.5538    0.8706    0.5778
        (    4)   (    4)   (    5)   (   10)   (   12)   (   15)
        S=0.108   S=*****   S=*****   S=0.048   S=0.001   S=0.012

CEOTH   0.6725   99.0000    0.6060    0.6077    0.8386    0.5873
        (    4)   (    4)   (    5)   (   10)   (   12)   (   15)
        S=0.164   S=*****   S=0.139   S=0.031   S=0.001   S=0.011

DRIVE   0.7183    0.0705    0.1911   -0.3108   -0.2927   -0.4125
        (    4)   (    4)   (    5)   (   10)   (   12)   (   15)
        S=0.141   S=0.[illegible]15   S=0.379   S=0.191   S=0.178   S=0.063


         OSP03     OSP06     OSP09     OSP12     OSP15     OSP18

CETOT   0.5453   -0.2207    0.4151    0.3891    0.1635   -0.2548
        (    6)   (    8)   (    8)   (   14)   (   16)   (   18)
        S=0.129   S=0.300   S=0.153   S=0.085   S=0.273   S=0.154

CETCH   0.4906   -0.2057    0.4090    0.3869    0.0708   -0.3241
        (    6)   (    8)   (    8)   (   14)   (   16)   (   18)
        S=0.162   S=0.312   S=0.157   S=0.086   S=0.397   S=0.095

CEBUS   0.0207   -0.1688    0.4309    0.3761    0.2996   -0.0100
        (    6)   (    8)   (    8)   (   14)   (   16)   (   18)
        S=0.484   S=0.345   S=0.143   S=0.093   S=0.130   S=0.484

CEOTH   0.4781   -0.2279    0.4065    0.3868    0.1774   -0.2562
        (    6)   (    8)   (    8)   (   14)   (   16)   (   18)
        S=0.169   S=0.294   S=0.159   S=0.086   S=0.255   S=0.152

DRIVE  -0.3727   -0.1946    0.6954   -0.2295    0.0748   -0.0212
        (    5)   (    7)   (    8)   (   13)   (   15)   (   17)
        S=0.268   S=0.338   S=0.028   S=0.225   S=0.395   S=0.468


         OCM03     OCM06     OCM09     OCM12     OCM15     OCM18

CETOT  -0.2953   -0.0193   -0.1367   -0.3092   -0.0614   -0.1674
        (    6)   (    9)   (    8)   (   14)   (   16)   (   18)
        S=0.285   S=0.480   S=0.373   S=0.141   S=0.411   S=0.253

CETCH  -0.3104   -0.0150   -0.1106   -0.2513   -0.0083    0.1140
        (    6)   (    9)   (    8)   (   14)   (   16)   (   18)
        S=0.275   S=0.485   S=0.397   S=0.193   S=0.488   S=0.326

CEBUS   0.0066   -0.3054   -0.2557   -0.3675   -0.1201   -0.3875
        (    6)   (    9)   (    8)   (   14)   (   16)   (   18)
        S=0.495   S=0.212   S=0.271   S=0.098   S=0.329   S=0.056

CEOTH   0.4300    0.3168   -0.1017   -0.3896   -0.0872    0.0139
        (    6)   (    9)   (    8)   (   14)   (   16)   (   18)
        S=0.197   S=0.203   S=0.405   S=0.084   S=0.374   S=0.478

DRIVE  -0.3227   -0.3917   -0.1790    0.1280   -0.2352   -0.0000
        (    5)   (    8)   (    9)   (   13)   (   15)   (   17)
        S=0.298   S=0.159   S=0.336   S=0.338   S=0.199   S=0.500
```

```
ORC03     ORC06     ORC09     ORC12     ORC15     ORC18

-0.1573    0.2778    0.5128    0.4493    0.3378    0.0630
(    4)   (    4)   (    5)   (   10)   (   12)   (   15)
S=0.421   S=0.361   S=0.188   S=0.096   S=0.141   S=0.412

 0.3956    0.2778    0.5128    0.4280    0.3446    0.2131
(    4)   (    4)   (    5)   (   10)   (   12)   (   15)
S=0.302   S=0.361   S=0.188   S=0.109   S=0.136   S=0.223

-0.2597   99.0000   99.0000    0.4245    0.3374   -0.1522
(    4)   (    4)   (    5)   (   10)   (   12)   (   15)
S=0.370   S=*****   S=*****   S=0.111   S=0.142   S=0.294

-0.2093   99.0000    0.5128    0.5382    0.3070    0.3976
(    4)   (    4)   (    5)   (   10)   (   12)   (   15)
S=0.395   S=*****   S=0.188   S=0.054   S=0.166   S=0.071

-0.2489    0.7833   -0.0859   -0.2923   -0.4499   -0.1981
(    4)   (    4)   (    5)   (   10)   (   12)   (   15)
S=0.375   S=0.108   S=0.445   S=0.206   S=0.071   S=0.240


OCR       CCR       OCR       OCR       OCR       OCR

 0.3005    0.2151    0.1991    0.1734    0.1986    0.2054
(   23)   (   23)   (   23)   (   23)   (   23)   (   23)
S=0.082   S=0.162   S=0.181   S=0.214   S=0.182   S=0.174

 0.2174    0.1628    0.1477    0.1149    0.1307    0.0816
(   23)   (   23)   (   23)   (   23)   (   23)   (   23)
S=0.160   S=0.229   S=0.251   S=0.301   S=0.276   S=0.356

 0.3009    0.3009    0.2981    0.2340    0.2450    0.3432
(   23)   (   23)   (   23)   (   23)   (   23)   (   23)
S=0.081   S=0.081   S=0.084   S=0.141   S=0.130   S=0.054

 0.3000    0.1091    0.2382    0.2390    0.2326    0.1904
(   23)   (   23)   (   23)   (   23)   (   23)   (   23)
S=0.082   S=0.310   S=0.137   S=0.136   S=0.143   S=0.192

 0.2024    0.2024    0.2024    0.2024    0.2024    0.2024
(   21)   (   21)   (   21)   (   21)   (   21)   (   21)
S=0.189   S=0.189   S=0.189   S=0.189   S=0.189   S=0.189


OCT03     OCT06     OCT09     OCT12     OCT15     OCT18

-0.4912   -0.0046    0.0167    0.0400    0.0079    0.2722
(    6)   (    9)   (    8)   (   14)   (   16)   (   18)
S=0.161   S=0.495   S=0.484   S=0.446   S=0.488   S=0.137

-0.3261   -0.0195    0.0338    0.1269    0.0970    0.4056
(    6)   (    9)   (    8)   (   14)   (   16)   (   18)
S=0.264   S=0.480   S=0.466   S=0.333   S=0.360   S=0.047

-0.5257   -0.0449   -0.0640   -0.0776   -0.0638   -0.0426
(    6)   (    9)   (    8)   (   14)   (   16)   (   18)
S=0.142   S=0.454   S=0.440   S=0.396   S=0.407   S=0.433

-0.2928    0.6780    0.0386   -0.0712   -0.0667    0.2515
(    6)   (    9)   (    8)   (   14)   (   16)   (   18)
S=0.287   S=0.022   S=0.464   S=0.404   S=0.403   S=0.157

-0.3124    0.4717    0.2181   -0.2972   -0.4775   -0.3372
(    5)   (    8)   (    9)   (   13)   (   15)   (   17)
S=0.175   S=0.12[illegible]   S=0.[illegible]12   S=0.162   S=0.036   S=0.013
```

CE AND DRIVE vs. OUTCOMES

FMC - High GPA

```
         OAC03    OAC06    OAC09    OAC12    OAC15    OAC18

CETOT   0.3537   0.2168   0.4429   0.7898   0.0878   0.4777
        (   10)  (   12)  (   10)  (   11)  (   10)  (   13)
        S=0.158  S=0.249  S=0.100  S=0.002  S=0.405  S=0.049

CETCH   0.3201   0.0303   0.4140   0.7753  -0.4133  -0.2981
        (   10)  (   12)  (   10)  (   11)  (   10)  (   13)
        S=0.184  S=0.463  S=0.117  S=0.003  S=0.118  S=0.161

CEBUS   0.1291   0.3635   0.3201   0.1729   0.5321   0.6877
        (   10)  (   12)  (   10)  (   11)  (   10)  (   13)
        S=0.361  S=0.123  S=0.184  S=0.306  S=0.057  S=0.005

CEOTH   0.0373   0.3523  -0.1903  -0.0740   0.0840   0.5117
        (   10)  (   12)  (   10)  (   11)  (   10)  (   13)
        S=0.459  S=0.131  S=0.299  S=0.414  S=0.409  S=0.037

DRIVE  -0.0235   0.5150   0.7088   0.4299   0.0203  -0.4221
        (   10)  (   12)  (   10)  (   11)  (   10)  (   13)
        S=0.474  S=0.043  S=0.011  S=0.093  S=0.478  S=0.075


         OSP03    OSP06    OSP09    OSP12    OSP15    OSP18

CETOT  -0.1950  -0.1716  -0.3636  -0.1844  -0.1218   0.0243
        (   18)  (   18)  (   13)  (   16)  (   16)  (   16)
        S=0.219  S=0.248  S=0.111  S=0.247  S=0.327  S=0.464

CETCH  -0.2042  -0.1649  -0.3685  -0.2108  -0.2991  -0.1140
        (   18)  (   18)  (   13)  (   16)  (   16)  (   16)
        S=0.208  S=0.257  S=0.108  S=0.217  S=0.130  S=0.337

CEBUS   0.0391  -0.0393   0.1545   0.0087   0.1847   0.1117
        (   18)  (   18)  (   13)  (   16)  (   16)  (   16)
        S=0.439  S=0.439  S=0.307  S=0.487  S=0.247  S=0.340

CEOTH   0.0154  -0.0544  -0.0880  -0.1489  -0.2384  -0.2455
        (   18)  (   18)  (   13)  (   16)  (   16)  (   15)
        S=0.476  S=0.415  S=0.387  S=0.291  S=0.187  S=0.180

DRIVE   0.1473  -0.1851   0.0735  -0.0376   0.0588  -0.0460
        (   16)  (   16)  (   12)  (   16)  (   16)  (   16)
        S=0.293  S=0.246  S=0.410  S=0.445  S=0.414  S=0.433


         OCM03    OCM06    OCM09    OCM12    OCM15    OCM18

CETOT   0.3443   0.3905   0.0159  -0.2011  -0.0834  -0.2959
        (   17)  (   17)  (   13)  (   15)  (   16)  (   16)
        S=0.088  S=0.061  S=0.479  S=0.236  S=0.379  S=0.133

CETCH   0.3256   0.3599   0.0307  -0.1878  -0.0446  -0.2054
        (   17)  (   17)  (   13)  (   15)  (   16)  (   16)
        S=0.101  S=0.078  S=0.460  S=0.251  S=0.435  S=0.223

CEBUS  -0.0182   0.1134  -0.3332  -0.0660  -0.0858  -0.3015
        (   17)  (   17)  (   13)  (   15)  (   16)  (   16)
        S=0.472  S=0.332  S=0.133  S=0.408  S=0.376  S=0.128

CEOTH   0.1655   0.1684   0.5330   0.0467   0.0462   0.0398
        (   17)  (   17)  (   13)  (   15)  (   16)  (   16)
        S=0.263  S=0.259  S=0.030  S=0.434  S=0.433  S=0.442

DRIVE  -0.5079  -0.3215  -0.3745   0.1394   0.1985   0.3239
        (   15)  (   15)  (   12)  (   15)  (   16)  (   16)
        S=0.028  S=0.121  S=0.115  S=0.310  S=0.231  S=0.111
```

```
 ORC03    ORC06    ORC09    ORC12    ORC15    ORC18

-0.4258  -0.2408  -0.3360   0.4136   0.2907   0.2806
(   10)  (   12)  (   10)  (   11)  (   10)  (   13)
S=0.110  S=0.225  S=0.171  S=0.103  S=0.208  S=0.177

-0.0710  -0.3447  -0.3432   0.3983   0.2480   0.3480
(   10)  (   12)  (   10)  (   11)  (   10)  (   13)
S=0.423  S=0.136  S=0.166  S=0.113  S=0.245  S=0.122

-0.4046   0.1346   0.0403   0.0705   0.0526   0.0132
(   10)  (   12)  (   10)  (   11)  (   10)  (   13)
S=0.123  S=0.338  S=0.456  S=0.418  S=0.443  S=0.483

-0.3930   0.1304   0.4926   0.2886   0.1343   0.4063
(   10)  (   12)  (   10)  (   11)  (   10)  (   13)
S=0.131  S=0.343  S=0.074  S=0.195  S=0.305  S=0.084

 0.2023   0.4304  -0.0172  -0.4377  -0.3929  -0.4278
(   10)  (   12)  (   10)  (   11)  (   10)  (   13)
S=0.288  S=0.081  S=0.481  S=0.089  S=0.131  S=0.072


 OCR      OCR      OCR      OCR      OCR      OCR

-0.0269   0.0135   0.0474   0.0588   0.0503   0.1279
(   30)  (   30)  (   30)  (   30)  (   30)  (   30)
S=0.444  S=0.472  S=0.402  S=0.379  S=0.396  S=0.250

-0.1365  -0.0881  -0.0880  -0.0940  -0.1016  -0.0526
(   30)  (   30)  (   30)  (   30)  (   30)  (   30)
S=0.236  S=0.322  S=0.322  S=0.311  S=0.297  S=0.391

 0.3004   0.2064   0.2486   0.2213   0.2243   0.2827
(   30)  (   30)  (   30)  (   30)  (   30)  (   30)
S=0.053  S=0.137  S=0.093  S=0.120  S=0.117  S=0.065

 0.3063   0.1902   0.1902   0.2389   0.2549   0.1905
(   30)  (   30)  (   30)  (   30)  (   30)  (   30)
S=0.050  S=0.157  S=0.157  S=0.102  S=0.087  S=0.157

 0.2364   0.2364   0.2364   0.2364   0.2364   0.2364
(   28)  (   28)  (   28)  (   28)  (   28)  (   28)
S=0.113  S=0.113  S=0.113  S=0.113  S=0.113  S=0.113


 OCT03    OCT06    OCT09    OCT12    OCT15    OCT18

 0.3108   0.4939   0.3068  -0.0918   0.0775  -0.1678
(   18)  (   18)  (   13)  (   15)  (   16)  (   16)
S=0.105  S=0.019  S=0.154  S=0.372  S=0.388  S=0.267

 0.4224   0.3247   0.2887  -0.0285   0.0666  -0.0524
(   18)  (   18)  (   13)  (   15)  (   16)  (   16)
S=0.040  S=0.094  S=0.169  S=0.460  S=0.403  S=0.424

-0.3521   0.4050   0.0787  -0.1274   0.0467  -0.2133
(   18)  (   18)  (   13)  (   15)  (   16)  (   16)
S=0.076  S=0.048  S=0.399  S=0.326  S=0.432  S=0.214

-0.1919   0.4836   0.5270   0.1335  -0.0132   0.1385
(   18)  (   18)  (   13)  (   15)  (   16)  (   16)
S=0.223  S=0.021  S=0.032  S=0.318  S=0.481  S=0.304

-0.3221   0.0728  -0.0139   0.1066  -0.0421  -0.0059
(   16)  (   16)  (   12)  (   15)  (   16)  (   16)
S=0.112  S=0.394  S=0.483  S=0.353  S=0.438  S=0.491
```

CE AND DRIVE vs. OUTCOMES

FMC - Honors

```
         OAC03     OAC06     OAC09     OAC12     OAC15     OAC18

CETOT    0.0914    0.1051    0.3834    0.2046    0.5151    0.3060
        (    11)  (    11)  (    16)  (    17)  (    21)  (    22)
        S=0.395   S=0.379   S=0.071   S=0.215   S=0.008   S=0.083

CETCH    0.4359    0.3628    0.3547    0.1979    0.4738    0.2010
        (    11)  (    11)  (    16)  (    17)  (    21)  (    22)
        S=0.090   S=0.136   S=0.089   S=0.223   S=0.015   S=0.185

CEBUS    0.2590    0.3674    0.4496    0.2370    0.5099    0.5303
        (    11)  (    11)  (    16)  (    17)  (    21)  (    22)
        S=0.221   S=0.133   S=0.040   S=0.180   S=0.009   S=0.006

CEOTH   -0.2510   -0.0993    0.2922    0.1444    0.5147   -0.3269
        (    11)  (    11)  (    16)  (    17)  (    21)  (    22)
        S=0.228   S=0.386   S=0.136   S=0.290   S=0.008   S=0.069

DRIVE   -0.5621    0.3104    0.0348    0.3924   -0.2338   -0.1581
        (    10)  (    10)  (    14)  (    16)  (    20)  (    20)
        S=0.018   S=0.191   S=0.453   S=0.066   S=0.161   S=0.253


         OSP03     OSP06     OSP09     OSP12     OSP15     OSP18

CETOT   -0.1997    0.1208   -0.1042    0.2744    0.2440    0.4570
        (    19)  (    19)  (    24)  (    27)  (    31)  (    31)
        S=0.206   S=0.311   S=0.314   S=0.083   S=0.093   S=0.005

CETCH   -0.1242    0.1262   -0.1008    0.0704    0.1521    0.2552
        (    19)  (    19)  (    24)  (    27)  (    31)  (    31)
        S=0.306   S=0.303   S=0.320   S=0.364   S=0.207   S=0.053

CEBUS   -0.0573    0.1091   -0.1006    0.6567    0.5163    0.5315
        (    19)  (    19)  (    24)  (    27)  (    31)  (    31)
        S=0.408   S=0.328   S=0.320   S=0.001   S=0.001   S=0.001

CEOTH   -0.1566    0.0287   -0.0664    0.1186    0.0643    0.0279
        (    19)  (    19)  (    24)  (    27)  (    31)  (    31)
        S=0.261   S=0.454   S=0.379   S=0.278   S=0.326   S=0.441

DRIVE    0.5493    0.2137    0.1909   -0.1479    0.1823    0.1030
        (    16)  (    15)  (    20)  (    23)  (    27)  (    26)
        S=0.013   S=0.213   S=0.210   S=0.250   S=0.181   S=0.308


         OCM03     OCM06     OCM09     OCM12     OCM15     OCM18

CETOT   -0.0496   -0.1970   -0.1523   -0.3432   -0.1187   -0.4147
        (    21)  (    23)  (    26)  (    28)  (    33)  (    32)
        S=0.415   S=0.184   S=0.229   S=0.037   S=0.255   S=0.009

CETCH   -0.1919   -0.1741    0.0090   -0.2842   -0.0798   -0.3034
        (    21)  (    23)  (    26)  (    28)  (    33)  (    32)
        S=0.202   S=0.213   S=0.483   S=0.071   S=0.329   S=0.046

CEBUS   -0.0318   -0.3947   -0.3101   -0.4031   -0.2216   -0.4010
        (    21)  (    23)  (    26)  (    28)  (    33)  (    32)
        S=0.446   S=0.031   S=0.062   S=0.017   S=0.108   S=0.011

CEOTH    0.2485   -0.0650   -0.2137   -0.2702   -0.0581   -0.0984
        (    21)  (    23)  (    26)  (    28)  (    33)  (    32)
        S=0.139   S=0.384   S=0.147   S=0.082   S=0.374   S=0.296

DRIVE   -0.1419   -0.1796   -0.2658   -0.2202   -0.2957   -0.2152
        (    18)  (    20)  (    22)  (    24)  (    29)  (    27)
        S=0.287   S=0.226   S=0.115   S=0.151   S=0.060   S=0.141
```

APPENDIX 7K

```
 ORC03     ORC06     ORC09     ORC12     ORC15     ORC18

 0.4134   -0.0043    0.4001    0.3630    0.2506    0.1510
(    11)  (    11)  (    16)  (    17)  (    21)  (    22)
S=0.103   S=0.495   S=0.062   S=0.076   S=0.137   S=0.251

 0.4020    0.0764    0.4080    0.4250    0.1686    0.1444
(    11)  (    11)  (    16)  (    17)  (    21)  (    22)
S=0.110   S=0.412   S=0.058   S=0.045   S=0.233   S=0.261

 0.1093    0.2159    0.1535    0.2709    0.3392    0.0779
(    11)  (    11)  (    16)  (    17)  (    21)  (    22)
S=0.375   S=0.262   S=0.285   S=0.146   S=0.066   S=0.365

 0.1664   -0.0676    0.3335    0.2252    0.2781    0.1093
(    11)  (    11)  (    16)  (    17)  (    21)  (    22)
S=0.312   S=0.422   S=0.103   S=0.182   S=0.111   S=0.314

-0.1142   -0.5012    0.0898    0.1110    0.0011   -0.0793
(    10)  (    10)  (    14)  (    16)  (    20)  (    20)
S=0.377   S=0.070   S=0.380   S=0.341   S=0.498   S=0.370


 OCR       OCR       OCR       OCR       OCR       OCR

 0.1710    0.1505    0.0900    0.1097    0.1487    0.1213
(    73)  (    73)  (    73)  (    73)  (    73)  (    73)
S=0.074   S=0.102   S=0.224   S=0.178   S=0.105   S=0.153

 0.1753    0.1689    0.0766    0.0953    0.1420    0.0781
(    73)  (    73)  (    73)  (    73)  (    73)  (    73)
S=0.069   S=0.077   S=0.260   S=0.211   S=0.115   S=0.256

 0.0461    0.0766    0.1214    0.1443    0.1460    0.1724
(    73)  (    73)  (    73)  (    73)  (    73)  (    73)
S=0.349   S=0.254   S=0.153   S=0.112   S=0.109   S=0.072

 0.0357    0.0313    0.0560    0.0645    0.1095    0.1018
(    73)  (    73)  (    73)  (    73)  (    73)  (    73)
S=0.382   S=0.396   S=0.319   S=0.294   S=0.178   S=0.196

 0.2677    0.2677    0.2677    0.2677    0.2677    0.2677
(    64)  (    64)  (    64)  (    64)  (    64)  (    64)
S=0.016   S=0.016   S=0.016   S=0.016   S=0.016   S=0.016


 OCT03     OCT06     OCT09     OCT12     OCT15     OCT18

-0.1699   -0.1868   -0.0903   -0.1172   -0.0671   -0.1699
(    21)  (    23)  (    26)  (    28)  (    33)  (    32)
S=0.231   S=0.197   S=0.330   S=0.276   S=0.355   S=0.176

-0.3202   -0.3045   -0.2322   -0.0822   -0.0730   -0.1913
(    21)  (    23)  (    26)  (    28)  (    33)  (    32)
S=0.079   S=0.079   S=0.127   S=0.339   S=0.343   S=0.147

 0.1715   -0.2069   -0.1150   -0.1737   -0.0632   -0.0383
(    21)  (    23)  (    26)  (    28)  (    33)  (    32)
S=0.229   S=0.172   S=0.288   S=0.188   S=0.363   S=0.418

 0.2040    0.0981    0.1009   -0.0743   -0.0438   -0.0716
(    21)  (    23)  (    26)  (    28)  (    33)  (    32)
S=0.188   S=0.328   S=0.312   S=0.354   S=0.404   S=0.348

 0.1263   -0.2014   -0.5081   -0.4830   -0.4220   -0.6527
(    18)  (    20)  (    22)  (    24)  (    29)  (    27)
S=0.309   S=0.197   S=0.008   S=0.008   S=0.011   S=0.001
```

CE AND DRIVE vs. OUTCOMES

FMC - No Honors

APPENDIX 7L

```
         OAC03    OAC06    OAC09    OAC12    OAC15    OAC18

CETOT   0.1233   0.1054   0.5843   0.8544  -0.1229  -0.8830
       (     9) (     6) (     6) (     6) (     5) (     4)
       S=0.376  S=0.421  S=0.112  S=0.015  S=0.422  S=0.059

CETCH   0.6341   0.1784   0.5322   0.8596  -0.0432  -0.8806
       (     9) (     6) (     6) (     6) (     5) (     4)
       S=0.033  S=0.368  S=0.139  S=0.014  S=0.472  S=0.060

CEBUS  99.0000   0.3479   0.6157  -0.3976  -0.2397   0.1967
       (     9) (     6) (     6) (     6) (     5) (     4)
       S=*****  S=0.250  S=0.097  S=0.218  S=0.349  S=0.402

CEOTH  -0.3918  -0.0384   0.3944  99.0000  -0.4576  -0.9263
       (     9) (     6) (     6) (     6) (     5) (     4)
       S=0.149  S=0.471  S=0.220  S=*****  S=0.219  S=0.037

DRIVE  -0.1214   0.4538   0.8470  -0.2117   0.2469  -0.8011
       (     9) (     6) (     6) (     6) (     5) (     4)
       S=0.378  S=0.183  S=0.017  S=0.344  S=0.344  S=0.099


         OSP03    OSP06    OSP09    OSP12    OSP15    OSP18

CETOT  -0.3146   0.0524  -0.3103  -0.1007   0.0239   0.4804
       (    11) (     8) (     8) (     8) (     9) (     7)
       S=0.173  S=0.451  S=0.227  S=0.406  S=0.476  S=0.138

CETCH  -0.2051  -0.0711  -0.2867  -0.2323  -0.0156   0.4357
       (    11) (     8) (     8) (     8) (     9) (     7)
       S=0.273  S=0.434  S=0.246  S=0.290  S=0.484  S=0.164

CEBUS  99.0000   0.6666   0.1625   0.8404  -0.1473  -0.1496
       (    11) (     8) (     8) (     8) (     9) (     7)
       S=*****  S=0.036  S=0.350  S=0.004  S=0.353  S=0.374

CEOTH  -0.1731   0.0935  -0.2279   0.8691   0.9318   0.9781
       (    11) (     8) (     8) (     8) (     9) (     7)
       S=0.305  S=0.413  S=0.294  S=0.003  S=0.001  S=0.001

DRIVE   0.2241   0.8566   0.6958   0.4326   0.5037   0.5946
       (    11) (     8) (     8) (     8) (     9) (     7)
       S=0.254  S=0.003  S=0.028  S=0.142  S=0.083  S=0.080


         OCM03    OCM06    OCM09    OCM12    OCM15    OCM18

CETOT   0.2779  -0.0132  -0.5193  -0.5561  -0.6163  -0.7652
       (    12) (     8) (     9) (     9) (    10) (     8)
       S=0.191  S=0.488  S=0.076  S=0.060  S=0.029  S=0.013

CETCH   0.1487   0.2523  -0.2615  -0.4556  -0.6211  -0.7243
       (    12) (     8) (     9) (     9) (    10) (     8)
       S=0.322  S=0.273  S=0.248  S=0.109  S=0.028  S=0.021

CEBUS  99.0000  -0.8641  -0.7035  -0.6453   0.1452  -0.3625
       (    12) (     8) (     9) (     9) (    10) (     8)
       S=*****  S=0.003  S=0.017  S=0.030  S=0.344  S=0.189

CEOTH   0.2246  -0.2182  -0.4375  -0.7071  -0.0765  -0.4664
       (    12) (     8) (     9) (     9) (    10) (     8)
       S=0.241  S=0.302  S=0.119  S=0.017  S=0.417  S=0.122

DRIVE  -0.4481  -0.4447  -0.4157  -0.0595  -0.1233  -0.6450
       (    12) (     8) (     9) (     9) (    10) (     8)
       S=0.072  S=0.135  S=0.133  S=0.440  S=0.367  S=0.042
```

```
  ORC03    ORC06    ORC09    ORC12    ORC15    ORC18

 0.1147   0.0539   0.4092   0.9107  -0.2621   0.2735
(     9) (     6) (     6) (     6) (     5) (     4)
S=0.384  S=0.460  S=0.210  S=0.006  S=0.335  S=0.363

 0.1287  -0.1560  -0.1709   0.9193  -0.3031   0.2319
(     9) (     6) (     6) (     6) (     5) (     4)
S=0.371  S=0.384  S=0.373  S=0.005  S=0.310  S=0.384

99.0000   0.5592   0.8211  -0.5325   0.9352   0.8611
(     9) (     6) (     6) (     6) (     5) (     4)
S=*****  S=0.124  S=0.023  S=0.138  S=0.010  S=0.069

 0.0178   0.1505   0.5583  99.0000  -0.6273  -0.4784
(     9) (     6) (     6) (     6) (     5) (     4)
S=0.482  S=0.388  S=0.125  S=*****  S=0.129  S=0.261

 0.3273   0.8150   0.6692  -0.1198  -0.1564   0.4399
(     9) (     6) (     6) (     6) (     5) (     4)
S=0.195  S=0.024  S=0.073  S=0.411  S=0.401  S=0.280


  OCR      OCR      CCR      OCR      CCR      OCR

 0.2659   0.2794   0.2592   0.3020   0.3589   0.3586
(    28) (    28) (    28) (    28) (    28) (    28)
S=0.086  S=0.075  S=0.091  S=0.059  S=0.030  S=0.032

 0.2224   0.2390   0.2323   0.2732   0.3301   0.3169
(    28) (    28) (    28) (    28) (    28) (    28)
S=0.128  S=0.110  S=0.117  S=0.080  S=0.043  S=0.051

99.0000   0.0739   0.1922   0.3086   0.3212   0.3285
(    28) (    28) (    28) (    28) (    28) (    28)
S=*****  S=0.354  S=0.164  S=0.055  S=0.048  S=0.044

 0.1384   0.1599   0.1636   0.1711   0.1902   0.1902
(    28) (    28) (    28) (    28) (    28) (    28)
S=0.241  S=0.208  S=0.203  S=0.192  S=0.166  S=0.166

 0.1898   0.1898   0.1898   0.1898   0.1898   0.1898
(    28) (    28) (    28) (    28) (    28) (    28)
S=0.167  S=0.167  S=0.167  S=0.167  S=0.167  S=0.167


  OCT03    OCT06    OCT09    OCT12    OCT15    OCT18

 0.1429   0.1026   0.0816  -0.2748  -0.1362  -0.2332
(    13) (     9) (     9) (     9) (    10) (     8)
S=0.321  S=0.396  S=0.417  S=0.237  S=0.354  S=0.289

-0.0790   0.0815   0.1861  -0.1917  -0.1352  -0.2682
(    13) (     9) (     9) (     9) (    10) (     8)
S=0.399  S=0.417  S=0.316  S=0.311  S=0.355  S=0.260

99.0000  -0.6325  -0.2820  -0.5347   0.2238   0.5585
(    13) (     9) (     9) (     9) (    10) (     8)
S=*****  S=0.034  S=0.231  S=0.069  S=0.267  S=0.075

 0.3947   0.1118   0.0     -0.5766  -0.2357  -0.4472
(    13) (     9) (     9) (     9) (    10) (     8)
S=0.091  S=0.387  S=0.500  S=0.052  S=0.256  S=0.133

-0.2904  -0.7793  -0.5159   0.2066   0.0740  -0.2957
(    13) (     9) (     9) (     9) (    10) (     8)
S=0.168  S=0.007  S=0.078  S=0.297  S=0.420  S=0.238
```

CE AND DRIVE vs. OUTCOMES

FMC - Low IPR

APPENDIX 7M

```
          OAC03    OAC06    OAC09    OAC12    OAC15    OAC18         ORC03    ORC06    ORC09    ORC12    ORC15    ORC18

CETOT   -0.9484   0.4570   0.6276   0.3141   0.6076   0.4538       -0.8690  -0.3093  -0.1242   0.4011   0.6225   0.5669
        (     4) (     7) (     7) (     7) (     8) (     9)       (     4) (     7) (     7) (     7) (     8) (     9)
        S=0.027  S=0.151  S=0.066  S=0.246  S=0.055  S=0.110       S=0.065  S=0.250  S=0.395  S=0.186  S=0.050  S=0.056

CETCH   -0.4134   0.3978   0.7069   0.3927   0.5666  -0.6794       -0.1672  -0.4459  -0.0974   0.3749   0.5352   0.0806
        (     4) (     7) (     7) (     7) (     8) (     9)       (     4) (     7) (     7) (     7) (     8) (     9)
        S=0.293  S=0.188  S=0.038  S=0.192  S=0.072  S=0.022       S=0.416  S=0.158  S=0.418  S=0.204  S=0.086  S=0.418

CEBUS   99.0000   0.3607  -0.2763   0.2658   0.5992   0.7998       99.0000   0.1468  -0.1214   0.4646   0.7008   0.3775
        (     4) (     7) (     7) (     7) (     8) (     9)       (     4) (     7) (     7) (     7) (     8) (     9)
        S=*****  S=0.213  S=0.274  S=0.282  S=0.058  S=0.005       S=*****  S=0.377  S=0.398  S=0.147  S=0.026  S=0.158

CEOTH   -0.3317   0.4095  99.0000   0.0821   0.6082   0.2334       -0.5482   0.1010  99.0000   0.3443   0.6194   0.4353
        (     4) (     7) (     7) (     7) (     8) (     9)       (     4) (     7) (     7) (     7) (     8) (     9)
        S=0.334  S=0.181  S=*****  S=0.431  S=0.055  S=0.273       S=0.226  S=0.415  S=*****  S=0.225  S=0.051  S=0.121

DRIVE   -0.3368   0.7224   0.5687   0.3934  -0.2097  -0.2152        0.3485   0.1322  -0.5684  -0.3895  -0.3382  -0.5871
        (     4) (     7) (     7) (     7) (     8) (     9)       (     4) (     7) (     7) (     7) (     8) (     9)
        S=0.332  S=0.033  S=0.091  S=0.191  S=0.309  S=0.289       S=0.326  S=0.389  S=0.092  S=0.194  S=0.206  S=0.048


          OSP03    OSP06    OSP09    OSP12    OSP15    OSP18         OCR      OCR      OCR      OCR      OCR      OCR

CETOT    0.4458  -0.1840  -0.0360   0.4714   0.2735   0.0272        0.2541   0.2802   0.2876   0.2939   0.3172   0.3641
        (     6) (    11) (    11) (    14) (    13) (    13)       (    23) (    23) (    23) (    23) (    23) (    23)
        S=0.188  S=0.294  S=0.458  S=0.044  S=0.183  S=0.465       S=0.121  S=0.098  S=0.092  S=0.087  S=0.070  S=0.044

CETCH    0.4159  -0.1743  -0.0636   0.5328   0.1870  -0.1611        0.2371   0.2702   0.2838   0.2956   0.3582   0.4078
        (     6) (    11) (    11) (    14) (    13) (    13)       (    23) (    23) (    23) (    23) (    23) (    23)
        S=0.206  S=0.304  S=0.426  S=0.025  S=0.270  S=0.300       S=0.138  S=0.106  S=0.095  S=0.085  S=0.047  S=0.027

CEBUS   99.0000  -0.1240   0.0444   0.2211   0.2608   0.1542       99.0000   0.2393   0.2110   0.2040   0.2213   0.3031
        (     6) (    11) (    11) (    14) (    13) (    13)       (    23) (    23) (    23) (    23) (    23) (    23)
        S=*****  S=0.358  S=0.448  S=0.224  S=0.176  S=0.308       S=*****  S=0.136  S=0.167  S=0.175  S=0.155  S=0.080

CEOTH    0.3883  -0.0979   0.0      0.4534   0.2400  -0.2358        0.2811   0.0036   0.2162   0.2275   0.2302   0.1867
        (     6) (    11) (    11) (    14) (    13) (    13)       (    23) (    23) (    23) (    23) (    23) (    23)
        S=0.223  S=0.387  S=0.500  S=0.037  S=0.215  S=0.219       S=0.097  S=0.493  S=0.161  S=0.148  S=0.145  S=0.197

DRIVE   -0.4218  -0.3677  -0.0453   0.0683   0.1936   0.0532       -0.1793  -0.1793  -0.1793  -0.1793  -0.1793  -0.1793
        (     6) (    11) (    11) (    14) (    13) (    13)       (    23) (    23) (    23) (    23) (    23) (    23)
        S=0.202  S=0.133  S=0.447  S=0.408  S=0.263  S=0.431       S=0.207  S=0.207  S=0.207  S=0.207  S=0.207  S=0.207


          OCM03    OCM06    OCM09    OCM12    OCM15    OCM18         OCT03    OCT06    OCT09    OCT12    OCT15    OCT18

CETOT   -0.2666   0.0079   0.2935  -0.3221   0.0127  -0.2491       -0.4733  -0.1336  -0.0587  -0.1515   0.0059  -0.1392
        (     6) (    11) (    11) (    14) (    13) (    13)       (     6) (    11) (    11) (    14) (    13) (    13)
        S=0.305  S=0.491  S=0.191  S=0.131  S=0.484  S=0.206       S=0.172  S=0.348  S=0.432  S=0.303  S=0.492  S=0.325

CETCH   -0.2732   0.0081   0.2918  -0.4167   0.0249  -0.1855       -0.4394  -0.1601  -0.0707  -0.2328  -0.0959  -0.2764
        (     6) (    11) (    11) (    14) (    13) (    13)       (     6) (    11) (    11) (    14) (    13) (    13)
        S=0.300  S=0.491  S=0.192  S=0.069  S=0.468  S=0.272       S=0.192  S=0.319  S=0.418  S=0.212  S=0.378  S=0.180

CEBUS   99.0000   0.0242   0.3009  -0.1103   0.0343  -0.2468       99.0000   0.3052  -0.0538  -0.0545   0.1774  -0.0954
        (     6) (    11) (    11) (    14) (    13) (    13)       (     6) (    11) (    11) (    14) (    13) (    13)
        S=*****  S=0.472  S=0.184  S=0.354  S=0.456  S=0.208       S=*****  S=0.181  S=0.438  S=0.427  S=0.281  S=0.378

CEOTH    0.1581  -0.0363   0.2631  -0.2974  -0.0441  -0.0853       -0.4472   0.2609   0.0     -0.0025  -0.1091   0.2803
        (     6) (    11) (    11) (    14) (    13) (    13)       (     6) (    11) (    11) (    14) (    13) (    13)
        S=0.382  S=0.458  S=0.217  S=0.151  S=0.443  S=0.391       S=0.187  S=0.219  S=0.500  S=0.497  S=0.361  S=0.177

DRIVE    0.2285  -0.1010   0.0170  -0.0259  -0.1550  -0.0678       -0.2342  -0.1427  -0.4419  -0.2023  -0.4752  -0.0836
        (     6) (    11) (    11) (    14) (    13) (    13)       (     6) (    11) (    11) (    14) (    13) (    13)
        S=0.332  S=0.384  S=0.480  S=0.465  S=0.307  S=0.413       S=0.328  S=0.338  S=0.087  S=0.244  S=0.050  S=0.393
```

CE AND DRIVE vs. OUTCOMES

FMC - Mid IPR

```
       OAC03   OAC06   OAC09   OAC12   OAC15   OAC18

CETOT -0.1612 -0.1733  0.4203  0.5356  0.1968  0.3344
      (    3) (    6) (    6) (   10) (   13) (   12)
      S=0.448 S=0.371 S=0.203 S=0.055 S=0.266 S=0.144

CETCH  0.8460 -0.4901  0.4229  0.5344 -0.0445  0.2840
      (    3) (    6) (    6) (   10) (   13) (   12)
      S=0.179 S=0.162 S=0.202 S=0.056 S=0.443 S=0.185

CEBUS -0.3638  0.4593 99.0000  0.5399  0.5957  0.4327
      (    3) (    6) (    6) (   10) (   13) (   12)
      S=0.381 S=0.180 S=***** S=0.054 S=0.015 S=0.080

CEOTH -0.0756  0.4364 -0.2048  0.0410 -0.1958 -0.0131
      (    3) (    6) (    6) (   10) (   13) (   12)
      S=0.476 S=0.193 S=0.349 S=0.455 S=0.261 S=0.484

DRIVE  0.9886 -0.2932  0.5275  0.3971 -0.5380 -0.2180
      (    3) (    6) (    6) (   10) (   13) (   12)
      S=0.048 S=0.286 S=0.141 S=0.128 S=0.029 S=0.248


       OSP03   OSP06   OSP09   OSP12   OSP15   OSP18

CETOT -0.3028  0.1053 -0.5023 -0.0781 -0.1771  0.0653
      (   10) (    8) (    8) (   11) (   13) (   13)
      S=0.198 S=0.402 S=0.102 S=0.410 S=0.281 S=0.416

CETCH -0.2211 -0.3110 -0.4953 -0.0893 -0.2607 -0.0193
      (   10) (    8) (    8) (   11) (   13) (   13)
      S=0.270 S=0.227 S=0.106 S=0.397 S=0.195 S=0.475

CEBUS -0.1989  0.6553 99.0000  0.1660  0.1543  0.3646
      (   10) (    8) (    8) (   11) (   13) (   13)
      S=0.291 S=0.039 S=***** S=0.313 S=0.307 S=0.110

CEOTH -0.2457  0.6646 -0.2977 -0.0494 -0.2809 -0.2965
      (   10) (    8) (    8) (   11) (   13) (   13)
      S=0.247 S=0.036 S=0.237 S=0.443 S=0.176 S=0.163

DRIVE  0.4461 -0.4113 -0.5666 -0.5387 -0.0602 -0.2952
      (   10) (    8) (    8) (   11) (   13) (   13)
      S=0.098 S=0.156 S=0.072 S=0.044 S=0.423 S=0.164


       OCM03   OCM06   OCM09   OCM12   OCM15   OCM18

CETOT -0.1837  0.1843 -0.1440 -0.1577  0.6116  0.0534
      (   10) (   11) (    9) (   11) (   14) (   13)
      S=0.306 S=0.294 S=0.356 S=0.322 S=0.010 S=0.431

CETCH -0.1367  0.1008 -0.1518 -0.1431  0.7277  0.1048
      (   10) (   11) (    9) (   11) (   14) (   13)
      S=0.353 S=0.384 S=0.348 S=0.337 S=0.002 S=0.367

CEBUS -0.1156  0.1555 99.0000 -0.4676 -0.0684 -0.2019
      (   10) (   11) (    9) (   11) (   14) (   13)
      S=0.375 S=0.324 S=***** S=0.074 S=0.408 S=0.254

CEOTH -0.1428  0.2738  0.4096  0.4920  0.6398  0.3053
      (   10) (   11) (    9) (   11) (   14) (   13)
      S=0.347 S=0.208 S=0.137 S=0.062 S=0.007 S=0.155

DRIVE  0.1101  0.1539 -0.0808 -0.1895 -0.2602 -0.0843
      (   10) (   11) (    9) (   11) (   14) (   13)
      S=0.381 S=0.326 S=0.412 S=0.288 S=0.185 S=0.392
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APPENDIX 7N

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ORC03    ORC06    ORC09    ORC12    ORC15    ORC18

 0.4235  -0.2195  -0.4613  -0.0140  -0.1338   0.3361
(    3)  (    6)  (    6)  (   10)  (   13)  (   12)
S=0.361  S=0.338  S=0.179  S=0.485  S=0.331  S=0.143

 0.9993  -0.4060  -0.4769  -0.0180  -0.1565   0.2461
(    3)  (    6)  (    6)  (   10)  (   13)  (   12)
S=0.012  S=0.212  S=0.169  S=0.480  S=0.305  S=0.220

 0.2250   0.2572  99.0000  -0.0578  -0.0662   0.3778
(    3)  (    6)  (    6)  (   10)  (   13)  (   12)
S=0.428  S=0.311  S=*****  S=0.437  S=0.415  S=0.113

 0.5000   0.2588   0.8465   0.2872  -0.0245   0.1881
(    3)  (    6)  (    6)  (   10)  (   13)  (   12)
S=0.333  S=0.310  S=0.017  S=0.211  S=0.468  S=0.279

 0.7313  -0.9197  -0.8512  -0.5025  -0.1522  -0.0954
(    3)  (    6)  (    6)  (   10)  (   13)  (   12)
S=0.239  S=0.005  S=0.016  S=0.069  S=0.310  S=0.384


OCR      OCR      OCR      OCR      OCR      OCR

 0.1956   0.1508   0.0056   0.0093   0.0009  -0.0285
(   24)  (   24)  (   24)  (   24)  (   24)  (   24)
S=0.180  S=0.241  S=0.490  S=0.483  S=0.498  S=0.447

 0.1413   0.0874  -0.0762  -0.0682  -0.0736  -0.0801
(   24)  (   24)  (   24)  (   24)  (   24)  (   24)
S=0.255  S=0.342  S=0.362  S=0.376  S=0.366  S=0.355

 0.1417   0.1422   0.1422   0.1430   0.1155   0.0666
(   24)  (   24)  (   24)  (   24)  (   24)  (   24)
S=0.254  S=0.254  S=0.254  S=0.253  S=0.295  S=0.379

 0.1940   0.1781   0.1781   0.1781   0.2301   0.1599
(   24)  (   24)  (   24)  (   24)  (   24)  (   24)
S=0.182  S=0.203  S=0.203  S=0.203  S=0.140  S=0.228

 0.1984   0.1984   0.1984   0.1984   0.1984   0.1984
(   24)  (   24)  (   24)  (   24)  (   24)  (   24)
S=0.176  S=0.176  S=0.176  S=0.176  S=0.176  S=0.176


OCT03    OCT06    OCT09    OCT12    OCT15    OCT18

-0.0816   0.2852  -0.3132   0.0857   0.6494   0.0997
(   10)  (   11)  (    9)  (   11)  (   14)  (   13)
S=0.411  S=0.198  S=0.206  S=0.401  S=0.006  S=0.373

 0.0350   0.0250  -0.3240   0.0755   0.7453   0.1909
(   10)  (   11)  (    9)  (   11)  (   14)  (   13)
S=0.462  S=0.471  S=0.198  S=0.413  S=0.001  S=0.266

-0.2576   0.4593  99.0000   0.0      0.0273   0.0925
(   10)  (   11)  (    9)  (   11)  (   14)  (   13)
S=0.236  S=0.078  S=*****  S=0.500  S=0.463  S=0.382

-0.2264   0.5676   0.5754   0.6633   0.5862  -0.2217
(   10)  (   11)  (    9)  (   11)  (   14)  (   13)
S=0.265  S=0.034  S=0.053  S=0.013  S=0.014  S=0.233

-0.0880  -0.2253  -0.3391  -0.5204  -0.3571  -0.6285
(   10)  (   11)  (    9)  (   11)  (   14)  (   13)
S=0.404  S=0.253  S=0.186  S=0.050  S=0.105  S=0.011
```

CE AND DRIVE vs. OUTCOMES

FMC -High IPR

```
         OAC03    OAC06    OAC09    OAC12    OAC15    OAC18          ORC03    ORC06    ORC09    ORC12    ORC15    ORC18

CETOT   0.3980   0.6449   0.7832   0.0455  -0.3404   0.1444        -0.3645   0.1673  -0.2509   0.6617   0.4485  -0.0676
       (     6) (     5) (     4) (     5) (     5) (     4)       (     6) (     5) (     4) (     5) (     5) (     4)
       S=0.217  S=0.120  S=0.108  S=0.471  S=0.288  S=0.428        S=0.239  S=0.394  S=0.378  S=0.112  S=0.284  S=0.466

CETCH   0.7817   0.6920   0.7543  -0.1720  -0.4397  -0.4812        -0.0352   0.3512  -0.3374   0.2968  -0.0696  -0.0680
       (     6) (     5) (     4) (     5) (     5) (     4)       (     6) (     5) (     4) (     5) (     5) (     4)
       S=0.033  S=0.098  S=0.123  S=0.391  S=0.229  S=0.259        S=0.474  S=0.281  S=0.331  S=0.314  S=0.456  S=0.466

CEBUS  -0.2102   0.5650  -0.0977   0.3118   0.2439   0.9398        -0.3691   0.1091   0.9606   0.5231   0.8598   0.0008
       (     6) (     5) (     4) (     5) (     5) (     4)       (     6) (     5) (     4) (     5) (     5) (     4)
       S=0.345  S=0.160  S=0.451  S=0.305  S=0.346  S=0.030        S=0.236  S=0.431  S=0.020  S=0.183  S=0.031  S=0.500

CEOTH  -0.4083   0.6728  99.0000  99.0000  -0.6489  -0.5441        -0.5580   0.1700  99.0000  99.0000  -0.1834  -0.0421
       (     6) (     5) (     4) (     5) (     5) (     4)       (     6) (     5) (     4) (     5) (     5) (     4)
       S=0.211  S=0.107  S=*****  S=*****  S=0.118  S=0.228        S=0.125  S=0.392  S=*****  S=*****  S=0.384  S=0.479

DRIVE  -0.1409  -0.1397  -0.0569  -0.5432  -0.5504  -0.4595         0.3913   0.9807  -0.9785  -0.9194  -0.6138  -0.9326
       (     6) (     5) (     4) (     5) (     5) (     3)       (     6) (     5) (     4) (     5) (     5) (     3)
       S=0.395  S=0.411  S=0.472  S=0.172  S=0.168  S=0.348        S=0.222  S=0.002  S=0.011  S=0.014  S=0.135  S=0.117


         OSP03    OSP06    OSP09    OSP12    OSP15    OSP18          OCR      OCR      OCR      OCR      OCR      OCR

CETOT  -0.4937  -0.0003   0.0103   0.0441   0.1426   0.1247         0.3564   0.3744   0.2930   0.3481   0.4054   0.3599
       (     8) (     8) (     7) (     8) (     9) (     7)       (    29) (    29) (    29) (    29) (    29) (    29)
       S=0.107  S=0.500  S=0.491  S=0.459  S=0.357  S=0.395        S=0.029  S=0.023  S=0.061  S=0.032  S=0.015  S=0.028

CETCH  -0.2830  -0.0480  -0.0102  -0.3531   0.0959   0.2663         0.2234   0.3639   0.0307   0.1038   0.2395   0.1819
       (     8) (     8) (     7) (     8) (     9) (     7)       (    29) (    29) (    29) (    29) (    29) (    29)
       S=0.249  S=0.455  S=0.491  S=0.195  S=0.403  S=0.282        S=0.122  S=0.026  S=0.437  S=0.296  S=0.105  S=0.173

CEBUS  -0.3429   0.0197   0.1295   0.1331   0.1104  -0.0138         0.2431   0.2620   0.3425   0.3374   0.3608   0.3668
       (     8) (     8) (     7) (     8) (     9) (     7)       (    29) (    29) (    29) (    29) (    29) (    29)
       S=0.203  S=0.482  S=0.391  S=0.377  S=0.389  S=0.488        S=0.102  S=0.085  S=0.034  S=0.037  S=0.027  S=0.025

CEOTH  -0.2974  -0.0166  99.0000  -0.2393   0.3469   0.0491         0.3929   0.3390   0.3390   0.2944   0.4041   0.2469
       (     8) (     8) (     7) (     8) (     9) (     7)       (    29) (    29) (    29) (    29) (    29) (    29)
       S=0.237  S=0.484  S=*****  S=0.284  S=0.180  S=0.458        S=0.018  S=0.036  S=0.036  S=0.061  S=0.015  S=0.098

DRIVE   0.8524   0.2232  -0.1229  -0.1386   0.0316   0.0107         0.0123   0.0123   0.0123   0.0123   0.0123   0.0123
       (     8) (     7) (     5) (     7) (     8) (     6)       (    28) (    28) (    28) (    28) (    28) (    28)
       S=0.004  S=0.315  S=0.408  S=0.383  S=0.470  S=0.492        S=0.475  S=0.475  S=0.475  S=0.475  S=0.475  S=0.475


         OCM03    OCM06    OCM09    OCM12    OCM15    OCM18          OCT03    OCT06    OCT09    OCT12    OCT15    OCT18

CETOT   0.1582   0.1979   0.7314  -0.0346   0.0878  -0.1911        -0.5006   0.4649  -0.6837  -0.2703   0.0333  -0.1745
       (     9) (     8) (     7) (     8) (     9) (     7)       (    10) (     9) (     7) (     8) (     9) (     7)
       S=0.342  S=0.319  S=0.031  S=0.468  S=0.411  S=0.341        S=0.070  S=0.104  S=0.045  S=0.259  S=0.466  S=0.354

CETCH   0.4173   0.3811   0.7839   0.3669   0.2684  -0.2452        -0.3620   0.0392  -0.5956   0.6086   0.1838  -0.3729
       (     9) (     8) (     7) (     8) (     9) (     7)       (    10) (     9) (     7) (     8) (     9) (     7)
       S=0.132  S=0.176  S=0.018  S=0.186  S=0.242  S=0.298        S=0.152  S=0.460  S=0.079  S=0.055  S=0.318  S=0.205

CEBUS  -0.2294   0.1126  -0.6155  -0.1210  -0.0327  -0.0719        -0.2500   0.5030  -0.3149  -0.4094  -0.0260  -0.0279
       (     9) (     8) (     7) (     8) (     9) (     7)       (    10) (     9) (     7) (     8) (     9) (     7)
       S=0.276  S=0.395  S=0.071  S=0.388  S=0.467  S=0.439        S=0.243  S=0.084  S=0.246  S=0.157  S=0.474  S=0.476

CEOTH  -0.3337   0.0527  99.0000   0.0       0.1772  -0.1298        -0.3612   0.5345  99.0000  -0.2756  -0.4006   0.2982
       (     9) (     8) (     7) (     8) (     9) (     7)       (    10) (     9) (     7) (     8) (     9) (     7)
       S=0.190  S=0.451  S=*****  S=0.500  S=0.324  S=0.391        S=0.153  S=0.069  S=*****  S=0.254  S=0.143  S=0.258

DRIVE   0.1320   0.5556   0.7006   0.0       0.1474   0.2941        -0.0499  -0.2887  -0.8000  -0.0000  -0.2581   0.0
       (     9) (     7) (     6) (     7) (     8) (     6)       (    10) (     8) (     6) (     7) (     8) (     6)
       S=0.368  S=0.098  S=0.061  S=0.500  S=0.364  S=0.286        S=0.446  S=0.244  S=0.028  S=0.500  S=0.269  S=0.500
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CE AND DRIVE vs. OUTCOMES

FMC - Low IFR

	OAC03	OAC06	OAC09	OAC12	OAC15	OAC18	ORC03	ORC06	ORC09	ORC12	ORC15	ORC18
CETOT	-0.1701 (7) S=0.358	0.0005 (8) S=0.499	0.6070 (8) S=0.055	0.2345 (8) S=0.288	0.7446 (9) S=0.011	-0.0075 (10) S=0.492	0.1456 (7) S=0.378	-0.3261 (8) S=0.215	0.3931 (8) S=0.168	0.5026 (8) S=0.102	0.5610 (9) S=0.058	0.1707 (10) S=0.319
CETCH	0.3397 (7) S=0.228	0.0994 (8) S=0.407	0.5825 (8) S=0.065	0.2385 (8) S=0.285	0.7164 (9) S=0.015	-0.1548 (10) S=0.335	0.1486 (7) S=0.375	-0.4554 (8) S=0.128	0.0988 (8) S=0.408	0.6525 (8) S=0.040	0.5484 (9) S=0.063	0.1626 (10) S=0.327
CEBUS	99.0000 (7) S=*****	0.3569 (8) S=0.197	0.4305 (8) S=0.144	0.2206 (8) S=0.300	0.7772 (9) S=0.007	0.1539 (10) S=0.336	99.0000 (7) S=*****	0.1058 (8) S=0.402	0.2329 (8) S=0.289	0.1224 (8) S=0.386	0.5786 (9) S=0.051	0.1135 (10) S=0.377
CEOTH	-0.4249 (7) S=0.171	-0.0879 (8) S=0.418	0.4293 (8) S=0.144	0.0720 (8) S=0.433	0.7344 (9) S=0.012	0.0683 (10) S=0.426	0.0477 (7) S=0.460	-0.0650 (8) S=0.439	0.4645 (8) S=0.123	0.0843 (8) S=0.421	0.5461 (9) S=0.064	-0.2414 (10) S=0.251
DRIVE	-0.4531 (6) S=0.183	0.8053 (8) S=0.008	0.4240 (7) S=0.172	0.4483 (7) S=0.157	0.1787 (8) S=0.336	0.2276 (9) S=0.278	0.3846 (6) S=0.226	0.4684 (8) S=0.121	0.3284 (7) S=0.236	-0.4159 (7) S=0.177	-0.0338 (8) S=0.468	0.0086 (9) S=0.491

	OSP03	OSP06	OSP09	OSP12	OSP15	OSP18	OCR	OCR	OCR	OCR	OCR	OCR
CETOT	-0.1072 (13) S=0.364	0.3136 (13) S=0.148	-0.3367 (13) S=0.130	0.5537 (15) S=0.016	0.3602 (15) S=0.094	0.4159 (12) S=0.089	0.1255 (29) S=0.258	0.1177 (29) S=0.272	0.1541 (29) S=0.212	0.1862 (29) S=0.164	0.2305 (29) S=0.114	0.2334 (29) S=0.111
CETCH	-0.0126 (13) S=0.484	0.1622 (13) S=0.298	-0.3330 (13) S=0.133	0.3931 (15) S=0.074	0.1585 (15) S=0.286	0.2551 (12) S=0.212	0.1318 (29) S=0.248	0.1363 (29) S=0.240	0.1176 (29) S=0.272	0.1335 (29) S=0.245	0.1472 (29) S=0.223	0.1438 (29) S=0.228
CEBUS	-0.2075 (13) S=0.248	-0.3549 (13) S=0.117	-0.1146 (13) S=0.355	0.7074 (15) S=0.002	0.5413 (15) S=0.019	0.3568 (12) S=0.127	-0.1619 (29) S=0.201	-0.3201 (29) S=0.045	0.2093 (29) S=0.138	0.2698 (29) S=0.078	0.3085 (29) S=0.052	0.3112 (29) S=0.050
CEOTH	-0.1828 (13) S=0.275	0.3332 (13) S=0.133	-0.2069 (13) S=0.249	0.6900 (15) S=0.002	0.4814 (15) S=0.035	-0.1431 (12) S=0.329	0.0242 (29) S=0.450	0.0438 (29) S=0.411	0.1031 (29) S=0.297	0.1235 (29) S=0.262	0.1975 (29) S=0.152	0.1966 (29) S=0.153
DRIVE	0.0829 (11) S=0.404	-0.3097 (12) S=0.164	0.1799 (12) S=0.288	-0.0381 (14) S=0.448	0.1473 (14) S=0.308	0.0788 (11) S=0.409	0.3575 (26) S=0.036	0.3575 (26) S=0.036	0.3575 (26) S=0.036	0.3575 (26) S=0.036	0.3575 (26) S=0.036	0.3575 (26) S=0.036

	OCM03	OCM06	OCM09	OCM12	OCM15	OCM18	OCT03	OCT06	OCT09	OCT12	OCT15	OCT18
CETOT	0.2032 (13) S=0.253	0.2018 (14) S=0.245	-0.0044 (13) S=0.494	-0.3464 (15) S=0.103	-0.1526 (15) S=0.294	-0.2332 (12) S=0.233	0.2684 (13) S=0.188	0.0756 (14) S=0.399	0.0589 (13) S=0.424	-0.1275 (15) S=0.325	-0.1239 (15) S=0.330	-0.0509 (12) S=0.438
CETCH	0.0055 (13) S=0.493	0.3143 (14) S=0.137	0.1931 (13) S=0.264	-0.3081 (15) S=0.132	-0.1355 (15) S=0.315	-0.1914 (12) S=0.276	0.0146 (13) S=0.481	-0.0029 (14) S=0.496	0.0943 (13) S=0.380	-0.1483 (15) S=0.299	-0.1555 (15) S=0.290	-0.3042 (12) S=0.168
CEBUS	-0.0343 (13) S=0.456	-0.1168 (14) S=0.345	-0.1020 (13) S=0.370	-0.3748 (15) S=0.084	-0.1707 (15) S=0.272	-0.1559 (12) S=0.314	0.4530 (13) S=0.060	0.0833 (14) S=0.389	-0.2076 (13) S=0.248	-0.0700 (15) S=0.402	0.0027 (15) S=0.496	0.2851 (12) S=0.185
CEOTH	0.4444 (13) S=0.064	-0.1144 (14) S=0.348	-0.2138 (13) S=0.241	-0.2451 (15) S=0.189	-0.1051 (15) S=0.355	0.2040 (12) S=0.262	0.5049 (13) S=0.039	0.1360 (14) S=0.321	0.0542 (13) S=0.430	-0.0340 (15) S=0.452	-0.0952 (15) S=0.368	0.1334 (12) S=0.340
DRIVE	-0.6363 (11) S=0.018	-0.5059 (13) S=0.039	-0.3077 (12) S=0.155	-0.4447 (14) S=0.056	-0.4401 (14) S=0.055	-0.5500 (11) S=0.037	-0.5768 (11) S=0.032	-0.5234 (13) S=0.032	-0.5489 (12) S=0.032	-0.6242 (14) S=0.009	-0.6278 (14) S=0.008	-0.6897 (11) S=0.009

APPENDIX 7P

CE AND DRIVE vs. OUTCOMES

FMC - Mid IFR

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        OAC03    OAC06    OAC09    OAC12    OAC15    OAC18          ORC03    ORC06    ORC09    ORC12    ORC15    ORC18

CETOT   0.5404   0.0856   0.2108   0.5188  -0.1489   0.3497          0.9087  -0.4272  -0.2663   0.0346   0.0688   0.4809
       (     4) (     6) (     8) (    11) (    13) (    13)        (     4) (     6) (     8) (    11) (    13) (    13)
       S=0.230  S=0.436  S=0.308  S=0.051  S=0.314  S=0.121        S=0.047  S=0.199  S=0.262  S=0.460  S=0.412  S=0.048

CETCH   0.4277   0.0720   0.1860   0.5230  -0.1485   0.0172          0.6646  -0.4220  -0.2791   0.0219   0.0502   0.3866
       (     4) (     6) (     8) (    11) (    13) (    13)        (     4) (     6) (     8) (    11) (    13) (    13)
       S=0.286  S=0.446  S=0.330  S=0.049  S=0.314  S=0.478        S=0.068  S=0.202  S=0.252  S=0.474  S=0.435  S=0.096

CEBUS  99.0000   0.2143   0.4945   0.2966  -0.0169   0.6217         99.0000  -0.0395   0.0397  -0.3036   0.2420   0.2836
       (     4) (     6) (     8) (    11) (    13) (    13)        (     4) (     6) (     8) (    11) (    13) (    13)
       S=****** S=0.342  S=0.106  S=0.188  S=0.478  S=0.012        S=****** S=0.470  S=0.463  S=0.182  S=0.213  S=0.174

CEOTH   0.5447  99.0000  -0.2109  -0.0324  -0.0663   0.3585          0.0306  99.0000   0.5236   0.6906  -0.0444   0.3773
       (     4) (     6) (     8) (    11) (    13) (    13)        (     4) (     6) (     8) (    11) (    13) (    13)
       S=0.228  S=****** S=0.308  S=0.462  S=0.415  S=0.115        S=0.485  S=****** S=0.091  S=0.009  S=0.443  S=0.102

DRIVE   0.5447   0.4284   0.5244   0.5577  -0.4327  -0.3798          0.0306  -0.7482  -0.3583  -0.0114  -0.1649  -0.3658
       (     4) (     6) (     8) (    11) (    13) (    13)        (     4) (     6) (     8) (    11) (    13) (    13)
       S=0.228  S=0.198  S=0.091  S=0.037  S=0.070  S=0.100        S=0.485  S=0.044  S=0.164  S=0.487  S=0.295  S=0.110


        OSP03    OSP06    OSP09    OSP12    OSP15    OSP18          OCR      OCR      OCR      CCR      OCR      OCR

CETOT  -0.2461  -0.2312   0.0071   0.0203  -0.3648  -0.2567          0.1074   0.0850   0.0766   0.0858   0.1028   0.1784
       (     9) (     9) (     9) (    12) (    13) (    16)        (    22) (    22) (    22) (    22) (    22) (    22)
       S=0.262  S=0.275  S=0.493  S=0.475  S=0.110  S=0.169        S=0.317  S=0.353  S=0.367  S=0.352  S=0.324  S=0.213

CETCH  -0.2225  -0.2438  -0.0498  -0.0557  -0.2660  -0.2123          0.1084   0.0752   0.0670   0.0628   0.0731   0.1190
       (     9) (     9) (     9) (    12) (    13) (    16)        (    22) (    22) (    22) (    22) (    22) (    22)
       S=0.282  S=0.264  S=0.449  S=0.432  S=0.172  S=0.215        S=0.316  S=0.370  S=0.383  S=0.391  S=0.373  S=0.299

CEBUS  -0.1635   0.3308   0.9851   0.6447  -0.2235  -0.1168         -0.0885   0.1326   0.1326   0.1620   0.1352   0.2573
       (     9) (     9) (     9) (    12) (    13) (    16)        (    22) (    22) (    22) (    22) (    22) (    22)
       S=0.337  S=0.192  S=0.001  S=0.012  S=0.231  S=0.333        S=0.348  S=0.278  S=0.278  S=0.236  S=0.274  S=0.124

CEOTH  -0.1635  -0.2665  -0.0259   0.1899  -0.3193  -0.2705          0.1527   0.0798   0.0798   0.2453   0.2408   0.1775
       (     9) (     9) (     9) (    12) (    13) (    16)        (    22) (    22) (    22) (    22) (    22) (    22)
       S=0.337  S=0.244  S=0.474  S=0.277  S=0.144  S=0.155        S=0.249  S=0.362  S=0.362  S=0.136  S=0.140  S=0.215

DRIVE   0.5505  -0.6075   0.0022  -0.0388   0.2811  -0.0314          0.3277   0.3277   0.3277   0.3277   0.3277   0.3277
       (     8) (     9) (     9) (    12) (    13) (    16)        (    21) (    21) (    21) (    21) (    21) (    21)
       S=0.079  S=0.055  S=0.498  S=0.452  S=0.176  S=0.454        S=0.073  S=0.073  S=0.073  S=0.073  S=0.073  S=0.073


        OCM03    OCM06    OCM09    OCM12    OCM15    OCM18          OCT03    OCT06    OCT09    OCT12    OCT15    OCT18

CETOT   0.0481   0.0631  -0.3323  -0.2730   0.2994  -0.2957         -0.0783  -0.0492  -0.1057   0.0406   0.7074   0.2033
       (     9) (    11) (    11) (    13) (    15) (    17)        (     9) (    11) (    11) (    13) (    15) (    17)
       S=0.451  S=0.427  S=0.159  S=0.183  S=0.139  S=0.125        S=0.421  S=0.443  S=0.379  S=0.448  S=0.002  S=0.217

CETCH   0.0541   0.1057  -0.3122  -0.2212   0.1694  -0.2521         -0.0437  -0.0144  -0.0933   0.0654   0.6342   0.3296
       (     9) (    11) (    11) (    13) (    15) (    17)        (     9) (    11) (    11) (    13) (    15) (    17)
       S=0.435  S=0.379  S=0.175  S=0.234  S=0.273  S=0.165        S=0.456  S=0.483  S=0.392  S=0.416  S=0.006  S=0.098

CEBUS  -0.2427  -0.7594  -0.5164  -0.4844   0.4280  -0.2935         -0.3953  -0.6502  -0.4183  -0.2173   0.5543   0.0090
       (     9) (    11) (    11) (    13) (    15) (    17)        (     9) (    11) (    11) (    13) (    15) (    17)
       S=0.265  S=0.003  S=0.052  S=0.047  S=0.056  S=0.126        S=0.146  S=0.015  S=0.100  S=0.238  S=0.016  S=0.486

CEOTH   0.0693   0.2530   0.4303  -0.2482   0.3518   0.0944         -0.0395   0.3259   0.5677   0.0056   0.2997  -0.2512
       (     9) (    11) (    11) (    13) (    15) (    17)        (     9) (    11) (    11) (    13) (    15) (    17)
       S=0.430  S=0.226  S=0.093  S=0.207  S=0.099  S=0.359        S=0.460  S=0.164  S=0.034  S=0.493  S=0.139  S=0.165

DRIVE   0.0766   0.0805  -0.3179   0.0621  -0.2144  -0.0623          0.0695   0.2648  -0.2752  -0.2670  -0.1600  -0.4831
       (     9) (    11) (    11) (    13) (    15) (    17)        (     8) (    10) (    11) (    13) (    15) (    17)
       S=0.422  S=0.407  S=0.170  S=0.420  S=0.221  S=0.406        S=0.435  S=0.230  S=0.206  S=0.189  S=0.284  S=0.025
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CE AND DRIVE vs. OUTCOMES

FMC - High IFR

	ORC03	ORC06	ORC09	ORC12	ORC15	ORC18
CETOT	-0.1811 (8) S=0.334	0.3498 (9) S=0.178	0.2344 (10) S=0.257	0.2554 (9) S=0.254	-0.3613 (10) S=0.138	0.4267 (13) S=0.073
CETCH	-0.0448 (8) S=0.458	0.2692 (9) S=0.242	0.2937 (10) S=0.205	0.6082 (9) S=0.041	-0.4692 (10) S=0.086	0.5089 (13) S=0.038
CEBUS	99.0000 (8) S=******	0.3662 (9) S=0.166	-0.5071 (10) S=0.067	-0.3404 (9) S=0.185	-0.0664 (10) S=0.428	0.1821 (13) S=0.276
CEOTH	-0.4031 (8) S=0.161	99.0000 (9) S=******	0.0486 (10) S=0.447	-0.5503 (9) S=0.062	-0.2571 (10) S=0.237	0.0871 (13) S=0.389
DRIVE	0.8827 (7) S=0.004	0.8780 (8) S=0.002	0.4951 (8) S=0.106	-0.0787 (8) S=0.429	0.3920 (10) S=0.131	-0.2413 (12) S=0.225

	OSP03	OSP06	OSP09	OSP12	OSP15	OSP18	OCT03	OCT06	OCT09	OCT12	OCT15	OCT18
CETOT	-0.2550 (12) S=0.212	-0.2003 (14) S=0.246	-0.2021 (15) S=0.235	0.6470 (16) S=0.003	0.6649 (20) S=0.001	0.3002 (22) S=0.087	-0.0768 (13) S=0.402	-0.0154 (15) S=0.478	-0.3891 (16) S=0.068	-0.2101 (15) S=0.226	-0.1869 (20) S=0.213	-0.1100 (22) S=0.313
CETCH	-0.2060 (12) S=0.260	-0.2016 (14) S=0.245	-0.1580 (15) S=0.287	-0.1932 (16) S=0.237	0.1893 (20) S=0.212	-0.0085 (22) S=0.485	-0.0923 (13) S=0.382	-0.0345 (15) S=0.451	-0.3603 (16) S=0.085	0.2716 (15) S=0.164	-0.1371 (20) S=0.282	-0.2506 (22) S=0.130
CEBUS	-0.1752 (12) S=0.293	-0.0141 (14) S=0.481	-0.1626 (15) S=0.281	0.9008 (16) S=0.001	0.8464 (20) S=0.001	0.6697 (22) S=0.001	0.2433 (13) S=0.212	-0.0953 (15) S=0.368	-0.2098 (16) S=0.218	-0.4017 (15) S=0.069	-0.1711 (20) S=0.235	0.0847 (22) S=0.354
CEOTH	-0.0701 (12) S=0.414	-0.0802 (14) S=0.393	-0.1233 (15) S=0.331	-0.2117 (16) S=0.216	-0.2089 (20) S=0.188	-0.2136 (22) S=0.170	-0.1081 (13) S=0.363	0.2453 (15) S=0.189	0.2791 (16) S=0.148	0.0780 (15) S=0.391	0.0464 (20) S=0.423	0.2147 (22) S=0.169
DRIVE	0.5175 (8) S=0.095	0.5237 (10) S=0.060	0.1574 (10) S=0.332	0.2053 (12) S=0.261	-0.0783 (17) S=0.383	0.1012 (18) S=0.348	-0.1582 (9) S=0.333	-0.3602 (11) S=0.138	-0.5756 (11) S=0.032	-0.5868 (11) S=0.029	-0.5815 (17) S=0.007	-0.5521 (18) S=0.009

	OAC03	OAC06	OAC09	OAC12	OAC15	OAC18	OCM03	OCM06	OCM09	OCM12	OCM15	OCM18
CETOT	0.6380 (8) S=0.044	0.1184 (9) S=0.381	0.6301 (10) S=0.025	0.5240 (9) S=0.074	0.0428 (10) S=0.453	0.7027 (13) S=0.004	0.3661 (12) S=0.121	0.1457 (14) S=0.310	0.3584 (16) S=0.086	-0.2906 (15) S=0.147	-0.2492 (20) S=0.145	-0.2910 (22) S=0.094
CETCH	0.5037 (8) S=0.102	0.1152 (9) S=0.384	0.5592 (10) S=0.046	0.0716 (9) S=0.427	-0.2371 (10) S=0.255	0.1870 (13) S=0.270	0.3479 (12) S=0.134	0.2499 (14) S=0.194	0.4111 (16) S=0.057	0.2245 (15) S=0.211	0.0134 (20) S=0.478	-0.1803 (22) S=0.212
CEBUS	99.0000 (8) S=******	0.0187 (9) S=0.481	0.3000 (10) S=0.200	0.8481 (9) S=0.002	0.2658 (10) S=0.229	0.7759 (13) S=0.001	-0.2335 (12) S=0.233	-0.2656 (14) S=0.179	-0.3794 (16) S=0.074	-0.4648 (15) S=0.040	-0.4230 (20) S=0.032	-0.3366 (22) S=0.063
CEOTH	0.4437 (8) S=0.135	99.0000 (9) S=******	-0.0845 (10) S=0.408	0.5259 (9) S=0.073	-0.0347 (10) S=0.462	0.7171 (13) S=0.003	0.2335 (12) S=0.233	0.0866 (14) S=0.384	0.1415 (16) S=0.301	0.0276 (15) S=0.461	0.4278 (20) S=0.030	-0.0933 (22) S=0.340
DRIVE	-0.3474 (7) S=0.223	0.6696 (8) S=0.035	0.8229 (8) S=0.006	0.1461 (8) S=0.365	-0.2203 (10) S=0.270	-0.2903 (12) S=0.180	-0.5593 (8) S=0.075	-0.2178 (10) S=0.273	-0.0092 (11) S=0.489	0.1171 (11) S=0.366	-0.1182 (17) S=0.326	0.1722 (18) S=0.247

CE AND DRIVE vs. OUTCOMES

FMC - Low OCR

```
        ORC03       ORC06       ORC09       ORC12       ORC15       ORC18

CETOT    0.9148     -0.6620      0.4945      0.8164      0.4178      0.0278
        (     4)    (     5)    (     8)    (    10)    (    11)    (    11)
        S=0.043     S=0.112     S=0.106     S=0.002     S=0.100     S=0.468

CETCH    0.6341     -0.6678      0.0829      0.8204      0.4490      0.2764
        (     4)    (     5)    (     8)    (    10)    (    11)    (    11)
        S=0.183     S=0.109     S=0.423     S=0.002     S=0.083     S=0.205

CEBUS   99.0000     -0.2429      0.5941     -0.1581      0.1832     -0.2613
        (     4)    (     5)    (     8)    (    10)    (    11)    (    11)
        S=*****     S=0.347     S=0.060     S=0.331     S=0.295     S=0.219

CEOTH    0.4228     -0.2333      0.5941     99.0000     -0.1025     -0.1143
        (     4)    (     5)    (     8)    (    10)    (    11)    (    11)
        S=0.289     S=0.353     S=0.060     S=*****     S=0.382     S=0.369

DRIVE   -0.3802     -0.5264      0.0795     -0.1258     -0.2925      0.0589
        (     4)    (     5)    (     8)    (    10)    (    11)    (    11)
        S=0.318     S=0.181     S=0.426     S=0.368     S=0.191     S=0.435


        OSP03       OSP06       OSP09       OSP12       OSP15       OSP18       OCT03       OCT06       OCT09       OCT12       OCT15       OCT18

CETOT   -0.3467     -0.2404     -0.5578     -0.1243     -0.1974      0.2335      0.4043      0.2986      0.3735      0.0170      0.1712     -0.0443
        (    11)    (    12)    (    12)    (    15)    (    15)    (    14)    (    13)    (    16)    (    14)    (    17)    (    17)    (    15)
        S=0.148     S=0.226     S=0.030     S=0.329     S=0.240     S=0.211     S=0.085     S=0.130     S=0.094     S=0.474     S=0.256     S=0.438

CETCH   -0.2821     -0.2320     -0.5938     -0.1570     -0.2827      0.0859      0.1943      0.2294      0.4202      0.0298      0.1161      0.1024
        (    11)    (    12)    (    12)    (    15)    (    15)    (    14)    (    13)    (    16)    (    14)    (    17)    (    17)    (    15)
        S=0.200     S=0.234     S=0.021     S=0.288     S=0.154     S=0.385     S=0.262     S=0.196     S=0.067     S=0.455     S=0.329     S=0.358

CEBUS   -0.1636     -0.1672     -0.1881     -0.0057      0.0190      0.3008     -0.2480     -0.1316      0.1295     -0.0083      0.1492     -0.1222
        (    11)    (    12)    (    12)    (    15)    (    15)    (    14)    (    13)    (    16)    (    14)    (    17)    (    17)    (    15)
        S=0.315     S=0.302     S=0.279     S=0.492     S=0.473     S=0.148     S=0.207     S=0.314     S=0.330     S=0.487     S=0.284     S=0.332

CEOTH   -0.1393     -0.0849     -0.2919     99.0000     -0.1066     -0.2554      0.4783      0.2086      0.1754     99.0000      0.1876     -0.2436
        (    11)    (    12)    (    12)    (    15)    (    15)    (    14)    (    13)    (    16)    (    14)    (    17)    (    17)    (    15)
        S=0.341     S=0.397     S=0.179     S=*****     S=0.353     S=0.189     S=0.049     S=0.219     S=0.274     S=*****     S=0.235     S=0.191

DRIVE    0.1572     -0.0702      0.4541     -0.1758      0.2355      0.1063     -0.2298      0.0420     -0.1927     -0.3081     -0.2979     -0.2576
        (    10)    (    11)    (    12)    (    15)    (    15)    (    14)    (    12)    (    15)    (    14)    (    17)    (    17)    (    15)
        S=0.332     S=0.419     S=0.069     S=0.265     S=0.199     S=0.359     S=0.237     S=0.441     S=0.255     S=0.114     S=0.123     S=0.177


        OAC03       OAC06       OAC09       OAC12       OAC15       OAC18       OCM03       OCM06       OCM09       OCM12       OCM15       OCM18

CETOT    0.0288     -0.6583      0.4981      0.4902      0.0102      0.5326      0.4301      0.2330     -0.1961     -0.0607      0.0100     -0.3008
        (     4)    (     5)    (     8)    (    10)    (    11)    (    11)    (    13)    (    16)    (    14)    (    17)    (    17)    (    15)
        S=0.486     S=0.114     S=0.105     S=0.075     S=0.488     S=0.046     S=0.071     S=0.193     S=0.251     S=0.409     S=0.485     S=0.138

CETCH    0.9639     -0.2020      0.3746      0.5011     -0.1231      0.2233      0.3187      0.3364      0.0202     -0.0762     -0.0418     -0.3912
        (     4)    (     5)    (     8)    (    10)    (    11)    (    11)    (    13)    (    16)    (    14)    (    17)    (    17)    (    15)
        S=0.018     S=0.372     S=0.180     S=0.070     S=0.359     S=0.255     S=0.144     S=0.101     S=0.473     S=0.386     S=0.437     S=0.075

CEBUS   99.0000      0.8152      0.4213     -0.4179      0.4247      0.6566     -0.3005     -0.2417     -0.3031     -0.0038      0.0702     -0.2075
        (     4)    (     5)    (     8)    (    10)    (    11)    (    11)    (    13)    (    16)    (    14)    (    17)    (    17)    (    15)
        S=*****     S=0.046     S=0.149     S=0.115     S=0.096     S=0.014     S=0.159     S=0.184     S=0.146     S=0.494     S=0.395     S=0.229

CEOTH   -0.6391     -0.6083      0.4213     99.0000     -0.2778     -0.2651      0.3005     -0.0317     -0.2992     99.0000      0.1204      0.2032
        (     4)    (     5)    (     8)    (    10)    (    11)    (    11)    (    13)    (    16)    (    14)    (    17)    (    17)    (    15)
        S=0.180     S=0.138     S=0.149     S=*****     S=0.204     S=0.215     S=0.159     S=0.454     S=0.149     S=*****     S=0.323     S=0.234

DRIVE    0.0002      0.7549     -0.4510     -0.3107     -0.0571     -0.1858     -0.5143     -0.3594     -0.5583      0.1115     -0.3933     -0.3336
        (     4)    (     5)    (     8)    (    10)    (    11)    (    11)    (    12)    (    15)    (    14)    (    17)    (    17)    (    15)
        S=0.500     S=0.070     S=0.131     S=0.191     S=0.434     S=0.378     S=0.044     S=0.094     S=0.019     S=0.335     S=0.059     S=0.112
```

CE AND DRIVE vs. OUTCOMES

FMC - Mid OCR

```
         ORC03      ORC06      ORC09      ORC12      ORC15      ORC18
CETOT   -0.1457    -0.1532    -0.3815     0.2531     0.6118     0.5394
        (     9)   (     9)   (     8)   (     9)   (    10)   (    11)
        S=0.354    S=0.347    S=0.176    S=0.256    S=0.030    S=0.043
CETCH    0.6505    -0.3816    -0.3748     0.0805     0.4164     0.2040
        (     9)   (     9)   (     8)   (     9)   (    10)   (    11)
        S=0.029    S=0.156    S=0.180    S=0.418    S=0.116    S=0.274
CEBUS   -0.2749     0.2957    -0.0116     0.4896     0.7513     0.4297
        (     9)   (     9)   (     8)   (     9)   (    10)   (    11)
        S=0.237    S=0.220    S=0.489    S=0.090    S=0.006    S=0.094
CEOTH   -0.3695     0.4070    99.0000     0.4965     0.6535     0.4610
        (     9)   (     9)   (     8)   (     9)   (    10)   (    11)
        S=0.164    S=0.139    S=******   S=0.087    S=0.020    S=0.077
DRIVE   -0.3285    -0.6640    -0.7596    -0.7744    -0.4797    -0.4642
        (     9)   (     9)   (     8)   (     9)   (     9)   (    10)
        S=0.194    S=0.026    S=0.014    S=0.007    S=0.096    S=0.088


         OSP03      OSP06      OSP09      OSP12      OSP15      OSP18      OCT03      OCT06      OCT09      OCT12      OCT15      OCT18
CETOT   -0.3326    -0.3763    -0.0851     0.3858     0.3413     0.7589    -0.0907     0.4669     0.1249    -0.0538    -0.0604    -0.1450
        (    14)   (    11)   (    10)   (    12)   (    12)   (    11)   (    13)   (    10)   (     9)   (    11)   (    12)   (    11)
        S=0.123    S=0.127    S=0.408    S=0.108    S=0.139    S=0.004    S=0.384    S=0.087    S=0.374    S=0.438    S=0.426    S=0.335
CETCH   -0.2208    -0.4069    -0.1599     0.1675     0.2845     0.7556    -0.0193     0.1427     0.1228    -0.0025    -0.0500    -0.3781
        (    14)   (    11)   (    10)   (    12)   (    12)   (    11)   (    13)   (    10)   (     9)   (    11)   (    12)   (    11)
        S=0.224    S=0.107    S=0.330    S=0.301    S=0.185    S=0.004    S=0.475    S=0.347    S=0.377    S=0.497    S=0.439    S=0.128
CEBUS   -0.2319     0.0297     0.2633     0.7550     0.5215     0.0677    -0.1934     0.6066     0.1038    -0.1721    -0.0229     0.3475
        (    14)   (    11)   (    10)   (    12)   (    12)   (    11)   (    13)   (    10)   (     9)   (    11)   (    12)   (    11)
        S=0.213    S=0.465    S=0.231    S=0.002    S=0.041    S=0.422    S=0.263    S=0.031    S=0.395    S=0.306    S=0.472    S=0.148
CEOTH   -0.2263    -0.0347     0.0436     0.5364     0.2045     0.3040    -0.0482     0.7069     0.0533    -0.0660    -0.0936    -0.2422
        (    14)   (    11)   (    10)   (    12)   (    12)   (    11)   (    13)   (    10)   (     9)   (    11)   (    12)   (    11)
        S=0.218    S=0.460    S=0.452    S=0.036    S=0.262    S=0.182    S=0.438    S=0.011    S=0.446    S=0.424    S=0.386    S=0.237
DRIVE    0.3241    -0.5704    -0.3342    -0.3331    -0.0854    -0.1752     0.4204     0.3162     0.0575    -0.0810    -0.0628    -0.5698
        (    14)   (    11)   (    10)   (    12)   (    11)   (    10)   (    13)   (    10)   (     9)   (    11)   (    11)   (    10)
        S=0.129    S=0.033    S=0.173    S=0.145    S=0.401    S=0.314    S=0.076    S=0.187    S=0.442    S=0.406    S=0.427    S=0.043


         OAC03      OAC06      OAC09      OAC12      OAC15      OAC18      OCH03      OCH06      OCH09      OCH12      OCH15      OCH18
CETOT    0.3387     0.3952     0.2366     0.2556     0.7886     0.4029     0.0760     0.3082     0.0236    -0.2200    -0.1562    -0.8065
        (     9)   (     9)   (     8)   (     9)   (    10)   (    11)   (    13)   (    10)   (     9)   (    11)   (    12)   (    11)
        S=0.186    S=0.146    S=0.286    S=0.253    S=0.003    S=0.110    S=0.402    S=0.193    S=0.476    S=0.258    S=0.314    S=0.001
CETCH   -0.2859     0.0254     0.1800     0.3475     0.7135    -0.2151    -0.0427     0.2071     0.0007    -0.1019    -0.1007    -0.3961
        (     9)   (     9)   (     8)   (     9)   (    10)   (    11)   (    13)   (    10)   (     9)   (    11)   (    12)   (    11)
        S=0.253    S=0.474    S=0.335    S=0.180    S=0.010    S=0.263    S=0.445    S=0.283    S=0.499    S=0.383    S=0.378    S=0.114
CEBUS    0.4050     0.6209     0.5756     0.0301     0.7685     0.9017     0.2199     0.1981    -0.0390    -0.4387    -0.2712    -0.6579
        (     9)   (     9)   (     8)   (     9)   (    10)   (    11)   (    13)   (    10)   (     9)   (    11)   (    12)   (    11)
        S=0.140    S=0.037    S=0.068    S=0.469    S=0.005    S=0.001    S=0.235    S=0.292    S=0.460    S=0.093    S=0.197    S=0.014
CEOTH    0.1949     0.7024    99.0000    -0.0589     0.7478     0.0322     0.4147     0.2462     0.2362    -0.2633    -0.1106    -0.1979
        (     9)   (     9)   (     8)   (     9)   (    10)   (    11)   (    13)   (    10)   (     9)   (    11)   (    12)   (    11)
        S=0.308    S=0.017    S=******   S=0.440    S=0.006    S=0.463    S=0.079    S=0.246    S=0.270    S=0.217    S=0.366    S=0.280
DRIVE   -0.0470     0.2696     0.5659     0.6884    -0.3571    -0.4314    -0.2157    -0.1842    -0.3111    -0.1365     0.2011     0.2884
        (     9)   (     9)   (     8)   (     9)   (     9)   (    10)   (    13)   (    10)   (     9)   (    11)   (    11)   (    10)
        S=0.452    S=0.241    S=0.072    S=0.020    S=0.173    S=0.107    S=0.240    S=0.305    S=0.208    S=0.345    S=0.277    S=0.209
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CE AND DRIVE vs. OUTCOMES

FMC - High OCR

```
        OAC03     OAC06     OAC09     OAC12     OAC15     OAC18           ORC03     ORC06     ORC09     ORC12     ORC15     ORC18

CETOT  -0.0092    0.0575    0.3572    0.3337    0.4046    0.6598           0.1504   -0.1264   -0.0754    0.1201    0.2539    0.2711
      (    13)  (    25)  (    28)  (    34)  (    31)  (    28)         (    13)  (    25)  (    28)  (    34)  (    31)  (    28)
      S=0.488   S=0.392   S=0.031   S=0.027   S=0.012   S=0.001          S=0.312   S=0.274   S=0.352   S=0.249   S=0.084   S=0.081

CETCH   0.0077    0.0600    0.3380    0.3620    0.3964    0.5554           0.1587   -0.1271   -0.0803    0.1089    0.2425    0.2407
      (    13)  (    25)  (    28)  (    34)  (    31)  (    28)         (    13)  (    25)  (    28)  (    34)  (    31)  (    28)
      S=0.490   S=0.388   S=0.039   S=0.018   S=0.014   S=0.001          S=0.302   S=0.272   S=0.342   S=0.270   S=0.094   S=0.109

CEBUS  99.0000    0.0097    0.2422   -0.1350    0.1519    0.5306          99.0000    0.1056    0.1292   -0.0087    0.1134    0.1723
      (    13)  (    25)  (    28)  (    34)  (    31)  (    28)         (    13)  (    25)  (    28)  (    34)  (    31)  (    28)
      S=*****   S=0.482   S=0.107   S=0.223   S=0.207   S=0.002          S=*****   S=0.308   S=0.256   S=0.480   S=0.272   S=0.190

CEOTH  -0.2023   -0.1210   -0.1039    0.1150    0.0672   -0.1274          -0.1196   -0.0940   -0.1503    0.1153    0.0281   -0.0076
      (    13)  (    25)  (    28)  (    34)  (    31)  (    28)         (    13)  (    25)  (    28)  (    34)  (    31)  (    28)
      S=0.254   S=0.282   S=0.299   S=0.259   S=0.360   S=0.259          S=0.349   S=0.327   S=0.223   S=0.258   S=0.440   S=0.485

DRIVE   0.1555    0.0936    0.1393    0.0404    0.1964    0.2736          -0.2908    0.2368    0.1483   -0.0237    0.2463    0.3190
      (    11)  (    22)  (    24)  (    26)  (    24)  (    20)         (    11)  (    22)  (    24)  (    26)  (    24)  (    20)
      S=0.324   S=0.344   S=0.259   S=0.422   S=0.179   S=0.122          S=0.193   S=0.144   S=0.245   S=0.454   S=0.123   S=0.085


        OSP03     OSP06     OSP09     OSP12     OSP15     OSP18           OCR       OCR       OCR       OCR       OCR       OCR

CETOT  -0.0778   -0.2125   -0.0028    0.0111   -0.0438   -0.0267          -0.2236    0.1549    0.1969    0.2196    0.1956    0.1663
      (    24)  (    36)  (    39)  (    42)  (    42)  (    37)         (    36)  (    36)  (    36)  (    36)  (    36)  (    36)
      S=0.359   S=0.107   S=0.493   S=0.472   S=0.391   S=0.438          S=0.095   S=0.183   S=0.125   S=0.099   S=0.127   S=0.166

CETCH  -0.0737   -0.2035   -0.0691   -0.1012   -0.1358   -0.0056           0.1076    0.2758    0.2987    0.2609    0.2332    0.2132
      (    24)  (    36)  (    39)  (    42)  (    42)  (    37)         (    36)  (    36)  (    36)  (    36)  (    36)  (    36)
      S=0.366   S=0.117   S=0.338   S=0.262   S=0.196   S=0.487          S=0.266   S=0.052   S=0.038   S=0.062   S=0.086   S=0.106

CEBUS  99.0000   -0.1325    0.7204    0.5605    0.3816    0.0399          -0.3657   -0.3657   -0.2866   -0.1770   -0.1648   -0.0626
      (    24)  (    36)  (    39)  (    42)  (    42)  (    37)         (    36)  (    36)  (    36)  (    36)  (    36)  (    36)
      S=*****   S=0.221   S=0.001   S=0.001   S=0.006   S=0.407          S=0.014   S=0.014   S=0.045   S=0.151   S=0.168   S=0.358

CEOTH  -0.0789   -0.0933   -0.0932   -0.0789   -0.1190   -0.1385          99.0000   99.0000   99.0000    0.1687    0.1545    0.1032
      (    24)  (    36)  (    39)  (    42)  (    42)  (    37)         (    36)  (    36)  (    36)  (    36)  (    36)  (    36)
      S=0.357   S=0.294   S=0.286   S=0.310   S=0.226   S=0.207          S=*****   S=*****   S=*****   S=0.163   S=0.184   S=0.275

DRIVE  -0.3403    0.0834    0.2099    0.2976    0.4036    0.2405           0.5745    0.5745    0.5745    0.5745    0.5745    0.5745
      (    16)  (    28)  (    30)  (    29)  (    27)  (    23)         (    24)  (    24)  (    24)  (    24)  (    24)  (    24)
      S=0.099   S=0.337   S=0.133   S=0.058   S=0.018   S=0.134          S=0.002   S=0.002   S=0.002   S=0.002   S=0.002   S=0.002


        OCM03     OCM06     OCM09     OCM12     OCM15     OCM18           OCT03     OCT06     OCT09     OCT12     OCT15     OCT18

CETOT   0.0922    0.0399   -0.3231   -0.0231   -0.1614   -0.1995          -0.0512    0.0241    0.2614   -0.0100   -0.1604    0.1966
      (    26)  (    38)  (    40)  (    43)  (    43)  (    37)         (    26)  (    38)  (    40)  (    43)  (    43)  (    37)
      S=0.327   S=0.406   S=0.021   S=0.442   S=0.151   S=0.118          S=0.402   S=0.443   S=0.052   S=0.475   S=0.152   S=0.122

CETCH   0.0865    0.0250   -0.2941    0.0061   -0.0759   -0.2013          -0.0664   -0.0085    0.2487   -0.0256   -0.0914    0.2398
      (    26)  (    38)  (    40)  (    43)  (    43)  (    37)         (    26)  (    38)  (    40)  (    43)  (    43)  (    37)
      S=0.337   S=0.441   S=0.033   S=0.484   S=0.314   S=0.116          S=0.374   S=0.480   S=0.061   S=0.435   S=0.280   S=0.076

CEBUS  99.0000    0.2206   -0.3758   -0.2060   -0.3028   -0.2018          99.0000    0.1341    0.1699    0.0303   -0.2651   -0.0152
      (    26)  (    38)  (    40)  (    43)  (    43)  (    37)         (    26)  (    38)  (    40)  (    43)  (    43)  (    37)
      S=*****   S=0.092   S=0.008   S=0.093   S=0.024   S=0.116          S=*****   S=0.211   S=0.147   S=0.422   S=0.043   S=0.465

CEOTH   0.1124    0.0810    0.1837    0.1409   -0.0493    0.1558           0.3282    0.3837   -0.0671    0.0830   -0.0033    0.0259
      (    26)  (    38)  (    40)  (    43)  (    43)  (    37)         (    26)  (    38)  (    40)  (    43)  (    43)  (    37)
      S=0.292   S=0.314   S=0.128   S=0.184   S=0.377   S=0.179          S=0.051   S=0.009   S=0.340   S=0.298   S=0.492   S=0.440

DRIVE   0.1557    0.1472   -0.1345   -0.0432   -0.0580   -0.2556          -0.0157    0.2332    0.1878    0.0651    0.1085    0.1139
      (    18)  (    29)  (    31)  (    30)  (    28)  (    23)         (    18)  (    29)  (    31)  (    30)  (    28)  (    23)
      S=0.269   S=0.223   S=0.235   S=0.410   S=0.385   S=0.120          S=0.475   S=0.112   S=0.156   S=0.366   S=0.291   S=0.302
```

CE AND DRIVE vs. OUTCOMES
Sylvania - All People

```
         OAC03     OAC06     OAC09     OAC12     OAC15     OAC18

CETOT  -0.2198    0.0861    0.1754    0.3310    0.3310    0.6188
       (     6)  (    15)  (    16)  (    17)  (    18)  (    17)
       S=0.338   S=0.380   S=0.258   S=0.097   S=0.090   S=0.004

CETCH  -0.2198    0.0854    0.1241    0.3891    0.3851    0.5162
       (     6)  (    15)  (    16)  (    17)  (    18)  (    17)
       S=0.338   S=0.381   S=0.323   S=0.061   S=0.057   S=0.017

CEBUS  99.0000   -0.0032    0.4496   -0.3063   -0.0343    0.4312
       (     6)  (    15)  (    16)  (    17)  (    18)  (    17)
       S=*****   S=0.495   S=0.040   S=0.116   S=0.446   S=0.042

CEOTH  99.0000   99.0000   99.0000   -0.1430   -0.0915    0.0726
       (     6)  (    15)  (    16)  (    17)  (    18)  (    17)
       S=*****   S=*****   S=*****   S=0.292   S=0.359   S=0.391

DRIVE   0.4591    0.3291    0.4240    0.5187    0.1741    0.3190
       (     5)  (    14)  (    15)  (    15)  (    17)  (    14)
       S=0.219   S=0.125   S=0.058   S=0.024   S=0.252   S=0.133


         OSP03     OSP06     OSP09     OSP12     OSP15     OSP18

CETOT  -0.1157   -0.2661    0.0265   -0.0917   -0.1576    0.1293
       (    13)  (    22)  (    22)  (    24)  (    24)  (    20)
       S=0.353   S=0.116   S=0.453   S=0.335   S=0.231   S=0.293

CETCH  -0.1157   -0.2603   -0.0563   -0.1656   -0.2004    0.1647
       (    13)  (    22)  (    22)  (    24)  (    24)  (    20)
       S=0.353   S=0.121   S=0.402   S=0.220   S=0.174   S=0.244

CEBUS  99.0000   -0.1857    0.6610    0.4683    0.2879    0.0239
       (    13)  (    22)  (    22)  (    24)  (    24)  (    20)
       S=*****   S=0.204   S=0.001   S=0.010   S=0.086   S=0.460

CEOTH  99.0000   99.0000   99.0000   -0.0127   -0.1555   -0.2864
       (    13)  (    22)  (    22)  (    24)  (    24)  (    20)
       S=*****   S=*****   S=*****   S=0.476   S=0.234   S=0.110

DRIVE  -0.5592    0.0411    0.2174    0.2474    0.3625   -0.1114
       (    10)  (    18)  (    19)  (    20)  (    19)  (    15)
       S=0.046   S=0.436   S=0.196   S=0.146   S=0.064   S=0.346


         OCM03     OCM06     OCM09     OCM12     OCM15     OCM18

CETOT   0.0680    0.0065   -0.3196    0.0011   -0.1327   -0.2968
       (    14)  (    22)  (    23)  (    25)  (    25)  (    20)
       S=0.409   S=0.489   S=0.069   S=0.498   S=0.264   S=0.102

CETCH   0.0680   -0.0025   -0.2653   -0.0035   -0.0890   -0.2099
       (    14)  (    22)  (    23)  (    25)  (    25)  (    20)
       S=0.409   S=0.496   S=0.111   S=0.493   S=0.336   S=0.187

CEBUS  99.0000    0.2146   -0.4787   -0.0726   -0.2317   -0.3185
       (    14)  (    22)  (    23)  (    25)  (    25)  (    20)
       S=*****   S=0.169   S=0.010   S=0.365   S=0.133   S=0.086

CEOTH  99.0000   99.0000   99.0000    0.2977    0.0473    0.1645
       (    14)  (    22)  (    23)  (    25)  (    25)  (    20)
       S=*****   S=*****   S=*****   S=0.074   S=0.411   S=0.244

DRIVE   0.2068    0.3752    0.0051    0.0570    0.0411   -0.2712
       (    11)  (    18)  (    20)  (    21)  (    20)  (    15)
       S=0.277   S=0.062   S=0.491   S=0.403   S=0.432   S=0.164
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```
  ORC03     ORC06     ORC09     ORC12     ORC15     ORC18

 0.5437   -0.2419   -0.1281   -0.0065    0.2038    0.2113
(     6)  (    15)  (    16)  (    17)  (    18)  (    17)
S=0.132   S=0.192   S=0.318   S=0.490   S=0.209   S=0.208

 0.5437   -0.2412   -0.1596    0.0266    0.1238    0.1570
(     6)  (    15)  (    16)  (    17)  (    18)  (    17)
S=0.132   S=0.193   S=0.277   S=0.460   S=0.312   S=0.274

99.0000    0.0343    0.2603   -0.1798    0.1844    0.1319
(     6)  (    15)  (    16)  (    17)  (    18)  (    17)
S=*****   S=0.452   S=0.165   S=0.245   S=0.232   S=0.307

99.0000   99.0000   99.0000    0.3022    0.0392    0.1563
(     6)  (    15)  (    16)  (    17)  (    18)  (    17)
S=*****   S=*****   S=*****   S=0.119   S=0.439   S=0.225

 0.5466    0.2139    0.2401    0.0479    0.3705    0.3243
(     5)  (    14)  (    15)  (    15)  (    17)  (    14)
S=0.170   S=0.229   S=0.194   S=0.433   S=0.072   S=0.129


  OCR       OCR       OCR       OCR       OCR       OCR

-0.0085    0.3277    0.3652    0.3610    0.2286    0.0793
(     8)  (     8)  (     8)  (     8)  (     8)  (     8)
S=0.492   S=0.214   S=0.187   S=0.190   S=0.293   S=0.426

-0.0085    0.3277    0.3448    0.2702    0.1463    0.0752
(     8)  (     8)  (     8)  (     8)  (     8)  (     8)
S=0.492   S=0.214   S=0.201   S=0.259   S=0.365   S=0.430

99.0000   99.0000    0.2929    0.3107    0.2576    0.0316
(     8)  (     8)  (     8)  (     8)  (     8)  (     8)
S=*****   S=*****   S=0.241   S=0.227   S=0.269   S=0.470

99.0000   99.0000   99.0000    0.2148    0.1886    0.0384
(     8)  (     8)  (     8)  (     8)  (     8)  (     8)
S=*****   S=*****   S=*****   S=0.305   S=0.327   S=0.464

 0.5083    0.5083    0.5083    0.5083    0.5083    0.5083
(     8)  (     8)  (     8)  (     8)  (     8)  (     8)
S=0.099   S=0.099   S=0.099   S=0.099   S=0.099   S=0.099


  OCT03     OCT06     OCT09     OCT12     OCT15     OCT18

-0.0225    0.0731    0.3813    0.0006   -0.0565    0.3884
(    14)  (    22)  (    23)  (    25)  (    25)  (    20)
S=0.470   S=0.373   S=0.036   S=0.499   S=0.394   S=0.045

-0.0225    0.0609    0.3605   -0.0187    0.0015    0.4540
(    14)  (    22)  (    23)  (    25)  (    25)  (    20)
S=0.470   S=0.394   S=0.046   S=0.465   S=0.497   S=0.022

99.0000    0.2786    0.2235   -0.0334   -0.3568   -0.0833
(    14)  (    22)  (    23)  (    25)  (    25)  (    20)
S=*****   S=0.105   S=0.153   S=0.437   S=0.040   S=0.364

99.0000   99.0000   99.0000    0.4486    0.1699   -0.0207
(    14)  (    22)  (    23)  (    25)  (    25)  (    20)
S=*****   S=*****   S=*****   S=0.012   S=0.208   S=0.465

-0.0846    0.2635    0.0085    0.0573    0.0291    0.0366
(    11)  (    19)  (    20)  (    21)  (    20)  (    15)
S=0.402   S=0.145   S=0.486   S=0.403   S=0.451   S=0.448
```

CE AND DRIVE vs. OUTCOMES

Sylvania - Masters

APPENDIX 8C

```
         OAC03     OAC06     OAC09     OAC12     OAC15     OAC18
CETOT    0.5793    0.1461    0.7345    0.2943    0.6611    0.8187
        (     7)  (    10)  (    12)  (    17)  (    13)  (    11)
        S=0.086   S=0.344   S=0.003   S=0.126   S=0.007   S=0.001

CETCH    0.6304    0.1552    0.7775    0.2761    0.5100    0.6926
        (     7)  (    10)  (    12)  (    17)  (    13)  (    11)
        S=0.065   S=0.334   S=0.001   S=0.142   S=0.038   S=0.009

CEBUS   99.0000    0.5740   -0.1998    0.0182    0.5100    0.7669
        (     7)  (    10)  (    12)  (    17)  (    13)  (    11)
        S=*****   S=0.041   S=0.267   S=0.472   S=0.037   S=0.003

CEOTH   -0.3202   -0.2161   -0.1231    0.2590    0.2953   -0.3802
        (     7)  (    10)  (    12)  (    17)  (    13)  (    11)
        S=0.242   S=0.274   S=0.352   S=0.158   S=0.164   S=0.124

DRIVE    0.1682    0.0158   -0.1967   -0.6298    0.5388    0.1460
        (     6)  (     8)  (     9)  (    11)  (     7)  (     6)
        S=0.375   S=0.485   S=0.306   S=0.019   S=0.106   S=0.391


         OSP03     OSP06     OSP09     OSP12     OSP15     OSP18
CETOT   -0.1540   -0.2013   -0.2100    0.3119    0.2303   -0.1034
        (    11)  (    14)  (    17)  (    18)  (    18)  (    17)
        S=0.326   S=0.245   S=0.209   S=0.104   S=0.179   S=0.347

CETCH   -0.0919   -0.1645   -0.2163    0.0992    0.0555   -0.0791
        (    11)  (    14)  (    17)  (    18)  (    18)  (    17)
        S=0.394   S=0.287   S=0.202   S=0.348   S=0.413   S=0.381

CEBUS   99.0000   99.0000    0.2092    0.6624    0.4832    0.0289
        (    11)  (    14)  (    17)  (    18)  (    18)  (    17)
        S=*****   S=*****   S=0.210   S=0.001   S=0.021   S=0.456

CEOTH   -0.1491   -0.1226   -0.1379   -0.1400   -0.1086   -0.1702
        (    11)  (    14)  (    17)  (    18)  (    18)  (    17)
        S=0.331   S=0.338   S=0.299   S=0.290   S=0.334   S=0.257

DRIVE    0.4754    0.4358    0.1672    0.4309    0.5578    0.7407
        (     6)  (    10)  (    11)  (     9)  (     8)  (     8)
        S=0.170   S=0.122   S=0.312   S=0.123   S=0.075   S=0.018


         OCM03     OCM06     OCM09     OCM12     OCM15     OCM18
CETOT   -0.0885   -0.1173   -0.3377   -0.2485   -0.4260   -0.0768
        (    12)  (    16)  (    17)  (    18)  (    18)  (    17)
        S=0.392   S=0.333   S=0.092   S=0.160   S=0.041   S=0.385

CETCH   -0.2002   -0.1829   -0.3611   -0.1228   -0.2765   -0.1610
        (    12)  (    16)  (    17)  (    18)  (    18)  (    17)
        S=0.266   S=0.249   S=0.077   S=0.314   S=0.133   S=0.269

CEBUS   99.0000   -0.2894   -0.1739   -0.4205   -0.4282   -0.0820
        (    12)  (    16)  (    17)  (    18)  (    18)  (    17)
        S=*****   S=0.138   S=0.252   S=0.041   S=0.038   S=0.377

CEOTH    0.2984    0.3705    0.3637    0.0946   -0.1109    0.1549
        (    12)  (    16)  (    17)  (    18)  (    18)  (    17)
        S=0.173   S=0.079   S=0.076   S=0.354   S=0.331   S=0.276

DRIVE   -0.0847   -0.4051   -0.4092   -0.4760   -0.1456   -0.1772
        (     7)  (    11)  (    11)  (     9)  (     8)  (     8)
        S=0.428   S=0.108   S=0.106   S=0.098   S=0.365   S=0.337
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```
 ORC03     ORC06     ORC09     ORC12     ORC15     ORC18

-0.2745    0.1326   -0.0801    0.2586    0.2725    0.3964
(     7)  (    10)  (    12)  (    17)  (    13)  (    11)
S=0.276   S=0.358   S=0.402   S=0.122   S=0.184   S=0.114

-0.2097    0.1310   -0.0422    0.2678    0.4026    0.4264
(     7)  (    10)  (    12)  (    17)  (    13)  (    11)
S=0.326   S=0.359   S=0.448   S=0.149   S=0.086   S=0.095

99.0000    0.1240   -0.2262    0.1141    0.0146    0.2515
(     7)  (    10)  (    12)  (    17)  (    13)  (    11)
S=*****   S=0.366   S=0.240   S=0.331   S=0.481   S=0.228

-0.2563   -0.0371   -0.0759    0.1410   -0.0031   -0.3835
(     7)  (    10)  (    12)  (    17)  (    13)  (    11)
S=0.290   S=0.459   S=0.407   S=0.295   S=0.496   S=0.122

-0.4358   -0.0657   -0.1500   -0.0997   -0.5602   -0.0437
(     5)  (     8)  (     9)  (    11)  (     7)  (     6)
S=0.194   S=0.438   S=0.350   S=0.385   S=0.095   S=0.467


 OCR       OCR       OCR       OCR       OCR       OCR

-0.3146   -0.1185   -0.0334   -0.0334   -0.0282   -0.0011
(    28)  (    28)  (    28)  (    28)  (    28)  (    28)
S=0.052   S=0.274   S=0.433   S=0.433   S=0.443   S=0.498

 0.1389    0.2646    0.2749    0.2749    0.2749    0.2744
(    28)  (    28)  (    28)  (    28)  (    28)  (    28)
S=0.240   S=0.087   S=0.078   S=0.078   S=0.078   S=0.079

-0.3985   -0.3985   -0.3653   -0.3653   -0.3580   -0.3130
(    28)  (    28)  (    28)  (    28)  (    28)  (    28)
S=0.018   S=0.018   S=0.028   S=0.028   S=0.031   S=0.052

99.0000   99.0000   99.0000   99.0000   99.0000   99.0000
(    28)  (    28)  (    28)  (    28)  (    28)  (    28)
S=*****   S=*****   S=*****   S=*****   S=*****   S=*****

 0.6001    0.6001    0.6001    0.6001    0.6001    0.6001
(    16)  (    16)  (    16)  (    16)  (    16)  (    16)
S=0.007   S=0.007   S=0.007   S=0.007   S=0.007   S=0.007


 OCT03     OCT06     OCT09     OCT12     OCT15     OCT18

 0.2518    0.1022    0.0850    0.1309   -0.3790   -0.1170
(    12)  (    16)  (    17)  (    18)  (    18)  (    17)
S=0.215   S=0.353   S=0.373   S=0.302   S=0.060   S=0.327

 0.0997   -0.0015    0.0878    0.1751   -0.2895   -0.2459
(    12)  (    16)  (    17)  (    18)  (    18)  (    17)
S=0.379   S=0.498   S=0.369   S=0.244   S=0.122   S=0.171

99.0000   -0.1532    0.2031    0.1433   -0.2487    0.0756
(    12)  (    16)  (    17)  (    18)  (    18)  (    17)
S=*****   S=0.286   S=0.217   S=0.285   S=0.160   S=0.386

 0.3854    0.4997   -0.2111   -0.3240   -0.2358    0.0285
(    12)  (    16)  (    17)  (    18)  (    18)  (    17)
S=0.108   S=0.024   S=0.208   S=0.095   S=0.173   S=0.487

 0.1594    0.2710    0.4812    0.0282    0.3916    0.3174
(     7)  (    11)  (    11)  (     9)  (     8)  (     8)
S=0.365   S=0.210   S=0.067   S=0.471   S=0.169   S=0.222
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CE AND DRIVE vs. OUTCOMES

Sylvania - No Masters

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          OAC03    OAC06    OAC09    OAC12    OAC15    OAC18            ORC03    ORC06    ORC09    ORC12    ORC15    ORC18

CETOT   99.0000  -0.6115  -0.9640  -0.8144  -1.0000   1.0000          99.0000  -0.0686   0.2530   0.5457  99.0000  -1.0000
       (     1) (     4) (     3) (     3) (     2) (     2)         (     1) (     4) (     3) (     3) (     2) (     2)
       S=****** S=0.194  S=0.086  S=0.197  S=****** S=******         S=****** S=0.466  S=0.419  S=0.316  S=****** S=******

CETCH   99.0000  -0.6115  -0.9640  -0.8144  -1.0000   1.0000          99.0000  -0.0686   0.2530   0.5457  99.0000  -1.0000
       (     1) (     4) (     3) (     3) (     2) (     2)         (     1) (     4) (     3) (     3) (     2) (     2)
       S=****** S=0.194  S=0.086  S=0.197  S=****** S=******         S=****** S=0.466  S=0.419  S=0.316  S=****** S=******

CEBUS   99.0000  99.0000  99.0000  99.0000  99.0000  -1.0000          99.0000  99.0000  99.0000  99.0000  99.0000   1.0000
       (     1) (     4) (     3) (     3) (     2) (     2)         (     1) (     4) (     3) (     3) (     2) (     2)
       S=****** S=****** S=****** S=****** S=****** S=******         S=****** S=****** S=****** S=****** S=****** S=******

CEOTH   99.0000  99.0000  99.0000  99.0000  99.0000  -1.0000          99.0000  99.0000  99.0000  99.0000  99.0000   1.0000
       (     1) (     4) (     3) (     3) (     2) (     2)         (     1) (     4) (     3) (     3) (     2) (     2)
       S=****** S=****** S=****** S=****** S=****** S=******         S=****** S=****** S=****** S=****** S=****** S=******

DRIVE   99.0000  -0.2247   0.2517  -0.0953   1.0000   1.0000          99.0000   0.9250   0.7114   0.4528  99.0000  -1.0000
       (     1) (     3) (     3) (     3) (     2) (     2)         (     1) (     3) (     3) (     3) (     2) (     2)
       S=****** S=0.428  S=0.419  S=0.470  S=****** S=******         S=****** S=0.123  S=0.248  S=0.350  S=****** S=******


          OSP03    OSP06    OSP09    OSP12    OSP15    OSP18            OCR      OCR      OCR      OCR      OCR      OCR

CETOT   -0.4830  -0.4054  -0.3705  -0.2767  -0.1835  99.0000          99.0000   1.0000   1.0000   1.0000   1.0000   1.0000
       (     3) (     6) (     5) (     5) (     4) (     2)         (     2) (     2) (     2) (     2) (     2) (     2)
       S=0.340  S=0.213  S=0.270  S=0.326  S=0.408  S=******         S=****** S=****** S=****** S=****** S=****** S=******

CETCH   -0.4830  -0.4054  -0.3705  -0.2767  -0.1835  99.0000          99.0000   1.0000   1.0000   1.0000   1.0000   1.0000
       (     3) (     6) (     5) (     5) (     4) (     2)         (     2) (     2) (     2) (     2) (     2) (     2)
       S=0.340  S=0.213  S=0.270  S=0.326  S=0.408  S=******         S=****** S=****** S=****** S=****** S=****** S=******

CEBUS   99.0000  99.0000  99.0000  99.0000  99.0000  99.0000          99.0000  99.0000  99.0000  99.0000  99.0000  -1.0000
       (     3) (     6) (     5) (     5) (     4) (     2)         (     2) (     2) (     2) (     2) (     2) (     2)
       S=****** S=****** S=****** S=****** S=****** S=******         S=****** S=****** S=****** S=****** S=****** S=******

CEOTH   99.0000  99.0000  99.0000  99.0000  99.0000  99.0000          99.0000  99.0000  99.0000  99.0000  99.0000  -1.0000
       (     3) (     6) (     5) (     5) (     4) (     2)         (     2) (     2) (     2) (     2) (     2) (     2)
       S=****** S=****** S=****** S=****** S=****** S=******         S=****** S=****** S=****** S=****** S=****** S=******

DRIVE   -1.0000   0.4746   0.4746   0.3356   0.1367  99.0000           1.0000   1.0000   1.0000   1.0000   1.0000   1.0000
       (     2) (     5) (     5) (     5) (     4) (     2)         (     2) (     2) (     2) (     2) (     2) (     2)
       S=****** S=0.210  S=0.210  S=0.290  S=0.432  S=******         S=****** S=****** S=****** S=****** S=****** S=******


          OCM03    OCM06    OCM09    OCM12    OCM15    OCM18            OCT03    OCT06    OCT09    OCT12    OCT15    OCT18

CETOT    0.2774  -0.3430  -0.8165  -0.3621  -0.3591  99.0000          -0.5000   0.6124   1.0000   0.1779   0.8003   1.0000
       (     3) (     5) (     4) (     5) (     4) (     2)         (     3) (     5) (     4) (     5) (     4) (     2)
       S=0.411  S=0.286  S=0.092  S=0.275  S=0.320  S=******         S=0.333  S=0.136  S=0.001  S=0.387  S=0.100  S=******

CETCH    0.2774  -0.3430  -0.8165  -0.3621  -0.3591  99.0000          -0.5000   0.6124   1.0000   0.1779   0.8003   1.0000
       (     3) (     5) (     4) (     5) (     4) (     2)         (     3) (     5) (     4) (     5) (     4) (     2)
       S=0.411  S=0.286  S=0.092  S=0.275  S=0.320  S=******         S=0.333  S=0.136  S=0.001  S=0.387  S=0.100  S=******

CEBUS   99.0000  99.0000  99.0000  99.0000  99.0000  99.0000          99.0000  99.0000  99.0000  99.0000  99.0000  -1.0000
       (     3) (     5) (     4) (     5) (     4) (     2)         (     3) (     5) (     4) (     5) (     4) (     2)
       S=****** S=****** S=****** S=****** S=****** S=******         S=****** S=****** S=****** S=****** S=****** S=******

CEOTH   99.0000  99.0000  99.0000  99.0000  99.0000  99.0000          99.0000  99.0000  99.0000  99.0000  99.0000  -1.0000
       (     3) (     5) (     4) (     5) (     4) (     2)         (     3) (     5) (     4) (     5) (     4) (     2)
       S=****** S=****** S=****** S=****** S=****** S=******         S=****** S=****** S=****** S=****** S=****** S=******

DRIVE    1.0000  -0.2316  -0.6644  -0.1280   0.2812  99.0000          99.0000   0.6835   0.1478   0.2862  -0.4572   1.0000
       (     2) (     4) (     4) (     5) (     4) (     2)         (     2) (     4) (     4) (     5) (     4) (     2)
       S=****** S=0.384  S=0.168  S=0.419  S=0.359  S=******         S=****** S=0.158  S=0.426  S=0.320  S=0.271  S=******
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CE AND DRIVE vs. OUTCOMES

Sylvania - Doctorate

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        OAC03    OAC06    OAC09    OAC12    OAC15    OAC18         ORC03    ORC06    ORC09    ORC12    ORC15    ORC18

CETOT  -0.1741  -0.1076   0.4031   0.3955   0.5991   0.6525         0.0921  -0.1419  -0.2272   0.0913   0.2908   0.0256
       (   10)  (   17)  (   16)  (   20)  (   18)  (   18)        (   10)  (   17)  (   16)  (   20)  (   18)  (   18)
       S=0.315  S=0.340  S=0.061  S=0.042  S=0.004  S=0.002        S=0.400  S=0.294  S=0.199  S=0.351  S=0.121  S=0.460

CETCH  -0.1741  -0.1125   0.3458   0.4167   0.5690   0.4854         0.0921  -0.1412  -0.2804   0.0431   0.3052  -0.0056
       (   10)  (   17)  (   16)  (   20)  (   18)  (   18)        (   10)  (   17)  (   16)  (   20)  (   18)  (   18)
       S=0.315  S=0.334  S=0.095  S=0.034  S=0.007  S=0.021        S=0.400  S=0.294  S=0.146  S=0.428  S=0.109  S=0.491

CEBUS  99.0000   0.1737   0.4502  -0.1131   0.2238   0.5556        99.0000   0.0031   0.2941   0.1824   0.0593   0.0864
       (   10)  (   17)  (   16)  (   20)  (   18)  (   18)        (   10)  (   17)  (   16)  (   20)  (   18)  (   18)
       S=*****  S=0.252  S=0.040  S=0.317  S=0.186  S=0.008        S=*****  S=0.495  S=0.134  S=0.221  S=0.408  S=0.367

CEOTH  99.0000  99.0000  99.0000  -0.0992   0.0400  -0.2069        99.0000  99.0000  99.0000   0.2416  -0.0081  -0.0348
       (   10)  (   17)  (   16)  (   20)  (   18)  (   18)        (   10)  (   17)  (   16)  (   20)  (   18)  (   18)
       S=*****  S=*****  S=*****  S=0.339  S=0.437  S=0.205        S=*****  S=*****  S=*****  S=0.152  S=0.487  S=0.445

DRIVE   0.2753   0.2041   0.1904   0.0110   0.0367   0.2795        -0.2852   0.2037   0.2059   0.1229   0.1646   0.4986
       (    8)  (   15)  (   15)  (   16)  (   14)  (   12)        (    8)  (   15)  (   15)  (   16)  (   14)  (   12)
       S=0.255  S=0.233  S=0.240  S=0.484  S=0.450  S=0.189        S=0.247  S=0.237  S=0.222  S=0.325  S=0.287  S=0.049


        OSP03    OSP06    OSP09    OSP12    OSP15    OSP18         OCR      OCR      OCR      OCR      OCR      OCR

CETOT  -0.1025  -0.2453  -0.0180  -0.1659  -0.1460   0.0305        -0.7923  -0.0044   0.0493   0.0726   0.0665   0.1433
       (   18)  (   24)  (   25)  (   25)  (   24)  (   23)        (    9)  (    9)  (    9)  (    9)  (    9)  (    9)
       S=0.343  S=0.124  S=0.466  S=0.187  S=0.248  S=0.445        S=0.005  S=0.496  S=0.450  S=0.426  S=0.432  S=0.357

CETCH  -0.1025  -0.2424  -0.1044  -0.2663  -0.1647   0.0602        -0.0231   0.3203   0.3428   0.2630   0.2630   0.3085
       (   18)  (   24)  (   25)  (   25)  (   24)  (   23)        (    9)  (    9)  (    9)  (    9)  (    9)  (    9)
       S=0.343  S=0.127  S=0.310  S=0.083  S=0.194  S=0.392        S=0.476  S=0.200  S=0.183  S=0.247  S=0.247  S=0.210

CEBUS  99.0000  -0.1358   0.6058   0.5918   0.1625   0.0175        -0.9123  -0.9123  -0.8567  -0.6962  -0.7496  -0.7469
       (   18)  (   24)  (   25)  (   25)  (   24)  (   23)        (    9)  (    9)  (    9)  (    9)  (    9)  (    9)
       S=*****  S=0.263  S=0.001  S=0.001  S=0.224  S=0.468        S=0.001  S=0.001  S=0.002  S=0.019  S=0.010  S=0.010

CEOTH  99.0000  99.0000  -0.1005   0.2668  -0.0128  -0.0693        99.0000  99.0000  99.0000   0.2626   0.2626   0.2626
       (   18)  (   24)  (   25)  (   25)  (   24)  (   23)        (    9)  (    9)  (    9)  (    9)  (    9)  (    9)
       S=*****  S=*****  S=0.316  S=0.099  S=0.476  S=0.377        S=*****  S=*****  S=*****  S=0.247  S=0.247  S=0.247

DRIVE  -0.2543   0.0536   0.2830   0.3203   0.3572   0.2122         0.6730   0.6730   0.6730   0.6730   0.6730   0.6730
       (   12)  (   21)  (   21)  (   19)  (   16)  (   14)        (    9)  (    9)  (    9)  (    9)  (    9)  (    9)
       S=0.213  S=0.400  S=0.107  S=0.091  S=0.087  S=0.233        S=0.023  S=0.023  S=0.023  S=0.023  S=0.023  S=0.023


        OCM03    OCM06    OCM09    OCM12    OCM15    OCM18         OCT03    OCT06    OCT09    OCT12    OCT15    OCT18

CETOT   0.1840  -0.0475  -0.0763   0.2854  -0.2355  -0.2022        -0.0362   0.0344   0.2298  -0.1737  -0.2811   0.0632
       (   20)  (   26)  (   26)  (   26)  (   25)  (   23)        (   20)  (   26)  (   26)  (   26)  (   25)  (   23)
       S=0.219  S=0.409  S=0.355  S=0.079  S=0.129  S=0.177        S=0.440  S=0.434  S=0.129  S=0.198  S=0.087  S=0.387

CETCH   0.1840  -0.0570  -0.0063   0.3380  -0.1882  -0.1495        -0.0362   0.0232   0.2162  -0.1748  -0.2050   0.0301
       (   20)  (   26)  (   26)  (   26)  (   25)  (   23)        (   20)  (   26)  (   26)  (   26)  (   25)  (   23)
       S=0.219  S=0.391  S=0.488  S=0.046  S=0.184  S=0.248        S=0.440  S=0.455  S=0.144  S=0.197  S=0.163  S=0.446

CEBUS  99.0000   0.2985  -0.4534  -0.3024  -0.1801  -0.2872        99.0000   0.3411   0.1554   0.0329  -0.3111   0.0917
       (   20)  (   26)  (   26)  (   26)  (   25)  (   23)        (   20)  (   26)  (   26)  (   26)  (   25)  (   23)
       S=*****  S=0.069  S=0.010  S=0.067  S=0.195  S=0.092        S=*****  S=0.044  S=0.224  S=0.437  S=0.065  S=0.339

CEOTH  99.0000  99.0000  -0.0652  -0.3070  -0.0982   0.0758        99.0000  99.0000  -0.2571  -0.2249  -0.0975   0.0129
       (   20)  (   26)  (   26)  (   26)  (   25)  (   23)        (   20)  (   26)  (   26)  (   26)  (   25)  (   23)
       S=*****  S=*****  S=0.376  S=0.064  S=0.320  S=0.365        S=*****  S=*****  S=0.102  S=0.135  S=0.321  S=0.477

DRIVE   0.0135   0.1692  -0.2018  -0.1807  -0.0020  -0.3169        -0.0174   0.2152   0.1249  -0.1027  -0.0263  -0.3017
       (   14)  (   21)  (   22)  (   20)  (   17)  (   14)        (   14)  (   21)  (   22)  (   20)  (   17)  (   14)
       S=0.482  S=0.232  S=0.184  S=0.223  S=0.497  S=0.135        S=0.477  S=0.174  S=0.290  S=0.333  S=0.460  S=0.147
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CE AND DRIVE vs. OUTCOMES

Sylvania - Low Schools

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         OAC03     OAC06     OAC09     OAC12     OAC15     OAC18

CETOT   1.0000    0.3534    0.3625    0.1804    0.1899    0.6845
       (     2)  (     7)  (    11)  (    12)  (    13)  (    10)
       S=******  S=0.218   S=0.137   S=0.287   S=0.267   S=0.014

CETCH  99.0000    0.3728    0.3838    0.1609    0.2088    0.6920
       (     2)  (     7)  (    11)  (    12)  (    13)  (    10)
       S=******  S=0.205   S=0.122   S=0.309   S=0.247   S=0.013

CEBUS  99.0000   -0.2225   -0.2201   -0.1658    0.0792    0.5047
       (     2)  (     7)  (    11)  (    12)  (    13)  (    10)
       S=******  S=0.316   S=0.258   S=0.303   S=0.399   S=0.068

CEOTH   1.0000   -0.0348   -0.1081    0.4140    0.0960   -0.1353
       (     2)  (     7)  (    11)  (    12)  (    13)  (    10)
       S=******  S=0.470   S=0.376   S=0.090   S=0.377   S=0.355

DRIVE  -1.0000   -0.2272   -0.2495    0.2383    0.3773    0.2358
       (     2)  (     5)  (     7)  (     8)  (    10)  (     8)
       S=******  S=0.333   S=0.295   S=0.285   S=0.141   S=0.287


         OSP03     GSP06     OSP09     OSP12     OSP15     CSP18

CETOT  -0.1487   -0.0930    0.5192    0.3920    0.0677   -0.1715
       (     6)  (    12)  (    14)  (    16)  (    17)  (    13)
       S=0.389   S=0.387   S=0.029   S=0.067   S=0.398   S=0.288

CETCH  -0.2930   -0.0685    0.4750    0.2565   -0.0918   -0.1703
       (     6)  (    12)  (    14)  (    16)  (    17)  (    13)
       S=0.287   S=0.416   S=0.043   S=0.169   S=0.363   S=0.289

CEBUS  99.0000   -0.1310    0.6472    0.5659    0.5223    0.1911
       (     6)  (    12)  (    14)  (    16)  (    17)  (    13)
       S=******  S=0.342   S=0.006   S=0.011   S=0.016   S=0.266

CEOTH   0.2044   -0.1376   -0.2150   -0.1674   -0.2385   -0.5473
       (     6)  (    12)  (    14)  (    16)  (    17)  (    13)
       S=0.349   S=0.335   S=0.230   S=0.268   S=0.178   S=0.026

DRIVE  -0.9119    0.3512    0.5266    0.2480    0.4257    0.2779
       (     4)  (     8)  (     9)  (    10)  (    11)  (     9)
       S=0.044   S=0.197   S=0.073   S=0.245   S=0.096   S=0.235


         OCM03     OCM06     OCM09     OCM12     OCM15     OCM18

CETOT  -0.4368    0.1797   -0.8306   -0.3833   -0.0164   -0.3754
       (     6)  (    12)  (    14)  (    16)  (    17)  (    13)
       S=0.193   S=0.288   S=0.001   S=0.071   S=0.475   S=0.103

CETCH   0.1318    0.1710   -0.8204   -0.3844    0.1577   -0.3915
       (     6)  (    12)  (    14)  (    16)  (    17)  (    13)
       S=0.402   S=0.298   S=0.001   S=0.071   S=0.273   S=0.093

CEBUS  99.0000    0.0816   -0.1676   -0.1579   -0.4558   -0.2717
       (     6)  (    12)  (    14)  (    16)  (    17)  (    13)
       S=******  S=0.401   S=0.283   S=0.280   S=0.033   S=0.185

CEOTH  -0.6805   -0.0121    0.2069    0.2017    0.0076    0.4851
       (     6)  (    12)  (    14)  (    16)  (    17)  (    13)
       S=0.068   S=0.485   S=0.239   S=0.227   S=0.488   S=0.046

DRIVE   0.8837   -0.1977   -0.3799    0.0263   -0.1927   -0.2122
       (     4)  (     8)  (     9)  (    10)  (    11)  (     9)
       S=0.058   S=0.319   S=0.157   S=0.471   S=0.285   S=0.292
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APPENDIX 8F

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  ORC03     ORC06     ORC09     ORC12     ORC15     ORC18

 99.0000   -0.4148    0.2123    0.2769    0.1719    0.7698
(     2)  (     7)  (    11)  (    12)  (    13)  (    10)
S=******  S=0.177   S=0.265   S=0.192   S=0.287   S=0.005

 99.0000   -0.4078    0.2379    0.3931    0.0086    0.8451
(     2)  (     7)  (    11)  (    12)  (    13)  (    10)
S=******  S=0.182   S=0.241   S=0.103   S=0.489   S=0.001

 99.0000    0.3492   -0.2340   -0.3729    0.2458    0.3517
(     2)  (     7)  (    11)  (    12)  (    13)  (    10)
S=******  S=0.221   S=0.244   S=0.116   S=0.209   S=0.159

 99.0000   -0.3487   -0.1056    0.1742    0.1265   -0.0054
(     2)  (     7)  (    11)  (    12)  (    13)  (    10)
S=******  S=0.[illegible]  S=0.379   S=0.294   S=0.340   S=0.494

 99.0000    0.396[illegible]   0.0690   -0.1674    0.5436    0.1372
(     2)  (     6)  (     7)  (     8)  (    10)  (     8)
S=******  S=0.218   S=0.442   S=0.346   S=0.052   S=0.373


  CCR       OCR       OCR       OCR       OCR       OCR

  0.2612    0.2612    0.9181    0.7820    0.5059    0.3506
(     3)  (     3)  (     3)  (     3)  (     3)  (     3)
S=0.416   S=0.415   S=0.130   S=0.214   S=0.331   S=0.386

  0.2612    0.2612    0.9181    0.9181    0.3828    0.1267
(     3)  (     3)  (     3)  (     3)  (     3)  (     3)
S=0.416   S=0.416   S=0.130   S=0.130   S=0.375   S=0.460

 99.0000   99.0000   99.0000   99.0000    0.2612    0.5496
(     3)  (     3)  (     3)  (     3)  (     3)  (     3)
S=******  S=******  S=******  S=******  S=0.416   S=0.315

 99.0000   99.0000   99.0000    0.7053    0.7053    0.5865
(     3)  (     3)  (     3)  (     3)  (     3)  (     3)
S=******  S=******  S=******  S=0.251   S=0.251   S=0.301

  1.0000    1.0000    1.0000    1.0000    1.0000    1.0000
(     2)  (     2)  (     2)  (     2)  (     2)  (     2)
S=******  S=******  S=******  S=******  S=******  S=******


  OCT03     OCT06     OCT09     OCT12     OCT15     OCT18

  0.2606   -0.0128    0.2843    0.2652    0.0414    0.4561
(     6)  (    12)  (    14)  (    16)  (    17)  (    13)
S=0.309   S=0.484   S=0.162   S=0.160   S=0.437   S=0.059

 -0.2645   -0.0756    0.2718    0.2242    0.0922    0.5398
(     6)  (    12)  (    14)  (    16)  (    17)  (    13)
S=0.306   S=0.408   S=0.174   S=0.202   S=0.362   S=0.028

 99.0000   -0.1127    0.2233    0.0392   -0.1722   -0.1184
(     6)  (    12)  (    14)  (    16)  (    17)  (    13)
S=******  S=0.364   S=0.221   S=0.443   S=0.254   S=0.350

  0.6458    0.6311   -0.1262    0.1797    0.1178    0.0901
(     6)  (    12)  (    14)  (    16)  (    17)  (    13)
S=0.083   S=0.014   S=0.334   S=0.253   S=0.326   S=0.385

 -0.1280    0.7073    0.5041    0.4417    0.4005    0.6163
(     4)  (     8)  (     9)  (    10)  (    11)  (     9)
S=0.435   S=0.025   S=0.083   S=0.101   S=0.111   S=0.039
```

CE AND DRIVE vs. OUTCOMES

Sylvania - Top Schools

```
          OAC03    OAC06    OAC09    OAC12    OAC15    OAC18           ORC03    ORC06    ORC09    ORC12    ORC15    ORC18

CETOT     0.9967   0.2795   0.8301   0.5533   0.6002   0.8683           0.1890   0.7248   0.0332   0.5020   0.5637   0.0877
         (     3) (     8) (     8) (    10) (    11) (    12)         (     3) (     8) (     8) (    10) (    11) (    12)
         S=0.026  S=0.251  S=0.005  S=0.049  S=0.025  S=0.001          S=0.439  S=0.021  S=0.469  S=0.070  S=0.035  S=0.393

CETCH     1.0000   0.2804   0.8643   0.3147   0.5219   0.7760           0.2774   0.7093   0.1563   0.4203   0.5347   0.1013
         (     3) (     8) (     8) (    10) (    11) (    12)         (     3) (     8) (     8) (    10) (    11) (    12)
         S=0.003  S=0.251  S=0.003  S=0.188  S=0.050  S=0.002          S=0.411  S=0.024  S=0.356  S=0.113  S=0.045  S=0.377

CEBUS    99.0000   0.7439  -0.2399   0.3036   0.4306   0.5328          99.0000  -0.0020  -0.6818   0.2040   0.3517  -0.0140
         (     3) (     8) (     8) (    10) (    11) (    12)         (     3) (     8) (     8) (    10) (    11) (    12)
         S=*****  S=0.017  S=0.284  S=0.197  S=0.093  S=0.037          S=*****  S=0.498  S=0.002  S=0.286  S=0.144  S=0.483

CEOTH    -0.9683  -0.2406  -0.1964   0.6136   0.4316  99.0000          -0.5000  -0.1232  -0.0415   0.2671   0.2897  99.0000
         (     3) (     8) (     8) (    10) (    11) (    12)         (     3) (     8) (     8) (    10) (    11) (    12)
         S=0.080  S=0.283  S=0.321  S=0.030  S=0.092  S=*****          S=0.333  S=0.386  S=0.461  S=0.228  S=0.194  S=*****

DRIVE     1.0000   0.4862   0.1112   0.0610  -0.1303   0.1318           1.0000  -0.0740  -0.4210   0.5787   0.5107   0.5546
         (     2) (     5) (     6) (     7) (     8) (     9)         (     2) (     5) (     5) (     7) (     8) (     9)
         S=*****  S=0.154  S=0.417  S=0.448  S=0.379  S=0.368          S=*****  S=0.445  S=0.203  S=0.087  S=0.098  S=0.061


          OSP03    OSP06    OSP09    OSP12    OSP15    OSP18           OCR      OCR      OCR      OCR      OCR      OCR

CETOT    -0.0309  -0.3018  -0.2839  -0.0325  -0.0858   0.0747           0.5537   0.5379   0.5566   0.5549   0.5255   0.6753
         (    12) (    17) (    18) (    15) (    17) (    14)         (     5) (     5) (     5) (     5) (     5) (     5)
         S=0.462  S=0.120  S=0.127  S=0.454  S=0.372  S=0.400          S=0.166  S=0.175  S=0.165  S=0.166  S=0.182  S=0.105

CETCH    -0.0226  -0.2910  -0.3033  -0.1418  -0.1822   0.0417           0.5537   0.5379   0.5258   0.5258   0.5258   0.7645
         (    12) (    17) (    18) (    15) (    17) (    14)         (     5) (     5) (     5) (     5) (     5) (     5)
         S=0.472  S=0.129  S=0.111  S=0.307  S=0.242  S=0.444          S=0.166  S=0.175  S=0.181  S=0.181  S=0.181  S=0.066

CEBUS    99.0000  99.0000   0.4694   0.7046   0.5636   0.1276          99.0000  99.0000   0.6000   0.5718   0.2458   0.0818
         (    12) (    17) (    18) (    15) (    17) (    14)         (     5) (     5) (     5) (     5) (     5) (     5)
         S=*****  S=*****  S=0.025  S=0.002  S=0.009  S=0.332          S=*****  S=*****  S=0.142  S=0.157  S=0.345  S=0.448

CEOTH    -0.1673  -0.1516  -0.1954  -0.1414  -0.1343  99.0000          99.0000  99.0000  99.0000  99.0000  99.0000  99.0000
         (    12) (    17) (    18) (    15) (    17) (    14)         (     5) (     5) (     5) (     5) (     5) (     5)
         S=0.302  S=0.281  S=0.219  S=0.308  S=0.304  S=*****          S=*****  S=*****  S=*****  S=*****  S=*****  S=*****

DRIVE    -0.5776  -0.0555  -0.1596   0.3497   0.5417   0.5512           0.8675   0.8675   0.8675   0.8675   0.8675   0.8675
         (     8) (    13) (    13) (    10) (    11) (     9)         (     4) (     4) (     4) (     4) (     4) (     4)
         S=0.132  S=0.427  S=0.301  S=0.161  S=0.043  S=0.062          S=0.066  S=0.066  S=0.066  S=0.066  S=0.066  S=0.066


          OCM03    OCM06    OCM09    OCM12    OCM15    OCM18           OCT03    OCT06    OCT09    OCT12    OCT15    OCT18

CETOT     0.0508   0.3313  -0.2445  -0.0172  -0.2219  -0.6897          -0.2114  -0.1761  -0.0814  -0.4191  -0.4992   0.3398
         (    12) (    18) (    18) (    16) (    17) (    14)         (    12) (    18) (    18) (    16) (    17) (    14)
         S=0.438  S=0.090  S=0.164  S=0.475  S=0.196  S=0.003          S=0.255  S=0.242  S=0.374  S=0.053  S=0.021  S=0.117

CETCH     0.0437   0.2920  -0.2402   0.0823  -0.1390  -0.6023          -0.2348  -0.2361  -0.0907  -0.3918  -0.4329   0.4264
         (    12) (    18) (    18) (    16) (    17) (    14)         (    12) (    18) (    18) (    16) (    17) (    14)
         S=0.446  S=0.120  S=0.169  S=0.381  S=0.297  S=0.011          S=0.231  S=0.173  S=0.360  S=0.067  S=0.041  S=0.064

CEBUS    99.0000  -0.1876  -0.3463  -0.5823  -0.4063  -0.5144          99.0000  -0.1196   0.2502   0.0972  -0.2996  -0.1428
         (    12) (    18) (    18) (    16) (    17) (    14)         (    12) (    18) (    18) (    16) (    17) (    14)
         S=*****  S=0.228  S=0.080  S=0.009  S=0.053  S=0.030          S=*****  S=0.318  S=0.158  S=0.360  S=0.121  S=0.313

CEOTH     0.1407   0.2319   0.3700   0.0403  -0.2797  99.0000           0.5142   0.5257  -0.1869  -0.3373  -0.4180  99.0000
         (    12) (    18) (    18) (    16) (    17) (    14)         (    12) (    18) (    18) (    16) (    17) (    14)
         S=0.331  S=0.177  S=0.065  S=0.441  S=0.138  S=*****          S=0.044  S=0.013  S=0.229  S=0.101  S=0.047  S=*****

DRIVE    -0.4409   0.0236   0.0327  -0.5345  -0.1613  -0.6542           0.4025   0.4174   0.3528   0.2059   0.2524  -0.5117
         (     8) (    13) (    13) (    11) (    11) (     9)         (     8) (    13) (    13) (    11) (    11) (     9)
         S=0.137  S=0.469  S=0.458  S=0.045  S=0.383  S=0.028          S=0.161  S=0.078  S=0.119  S=0.272  S=0.227  S=0.080
```

CE AND DRIVE vs. OUTCOMES

Sylvania - Low GPA

```
      OAC03    OAC06    OAC09    OAC12    OAC15    OAC18

CETOT -0.3244   0.5722   0.3190   0.4095   0.3394   0.1103
      (     4) (     5) (    10) (    13) (    12) (     7)
      S=0.338  S=0.157  S=0.185  S=0.082  S=0.140  S=0.407

CETCH -0.3244   0.5887   0.3249   0.4829   0.4672  -0.1451
      (     4) (     5) (    10) (    13) (    12) (     7)
      S=0.338  S=0.148  S=0.180  S=0.047  S=0.063  S=0.378

CEBUS 99.0000  -0.4605  -0.2081  -0.3457  -0.0305   0.6162
      (     4) (     5) (    10) (    13) (    12) (     7)
      S=*****  S=0.218  S=0.282  S=0.124  S=0.463  S=0.070

CEOTH 99.0000  99.0000  99.0000  -0.0962   0.0811  -0.2151
      (     4) (     5) (    10) (    13) (    12) (     7)
      S=*****  S=*****  S=*****  S=0.377  S=0.401  S=0.322

DRIVE -0.9727   0.0433  -0.0423  -0.2610   0.1937   0.1162
      (     3) (     5) (     9) (    10) (    10) (     5)
      S=0.077  S=0.472  S=0.460  S=0.233  S=0.296  S=0.426


      OSP03    OSP06    OSP09    OSP12    OSP15    OSP18

CETOT -0.0075   0.2046  -0.1531   0.0106  -0.0666  -0.0244
      (     6) (     6) (     9) (    13) (    13) (    12)
      S=0.434  S=0.349  S=0.347  S=0.486  S=0.389  S=0.470

CETCH -0.0075   0.2149  -0.1739  -0.0960  -0.2354  -0.2137
      (     6) (     6) (     9) (    13) (    13) (    12)
      S=0.494  S=0.341  S=0.327  S=0.377  S=0.219  S=0.252

CEBUS 99.0000  -0.2246   0.4279   0.3654   0.3350   0.4132
      (     6) (     6) (     9) (    13) (    13) (    12)
      S=*****  S=0.334  S=0.125  S=0.107  S=0.132  S=0.091

CEOTH 99.0000  99.0000  99.0000   0.7519  -0.0462  -0.0686
      (     6) (     6) (     9) (    13) (    13) (    12)
      S=*****  S=*****  S=*****  S=0.002  S=0.440  S=0.392

DRIVE  0.1227   0.3535   0.4093   0.3181   0.4695   0.3333
      (     3) (     4) (     5) (     9) (     9) (     8)
      S=0.461  S=0.323  S=0.210  S=0.202  S=0.101  S=0.210


      OCM03    OCM06    OCM09    OCM12    OCM15    OCM18

CETOT  0.5535  -0.3973  -0.4784   0.0920  -0.2160  -0.1468
      (     7) (     6) (    10) (    13) (    14) (    12)
      S=0.099  S=0.218  S=0.081  S=0.383  S=0.229  S=0.324

CETCH  0.5535  -0.4008  -0.4541   0.0556  -0.1995  -0.3257
      (     7) (     6) (    10) (    13) (    14) (    12)
      S=0.099  S=0.215  S=0.094  S=0.428  S=0.247  S=0.151

CEBUS 99.0000   0.1581  -0.4255   0.1615  -0.0911  -0.0430
      (     7) (     6) (    10) (    13) (    14) (    12)
      S=*****  S=0.382  S=0.110  S=0.299  S=0.378  S=0.447

CEOTH 99.0000  99.0000  99.0000  -0.3324   0.0033   0.2740
      (     7) (     6) (    10) (    13) (    14) (    12)
      S=*****  S=*****  S=*****  S=0.134  S=0.495  S=0.194

DRIVE  0.9520   0.2391  -0.4517   0.4720   0.1752   0.2907
      (     4) (     4) (     7) (     9) (    10) (     8)
      S=0.019  S=0.380  S=0.154  S=0.100  S=0.314  S=0.242
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```
ORC03    ORC06    ORC09    ORC12    ORC15    ORC18

-0.5947  -0.9308  -0.1879  -0.0734  -0.1636   0.2930
(     4) (     5) (    10) (    13) (    12) (     7)
S=0.203  S=0.011  S=0.302  S=0.406  S=0.306  S=0.262

-0.5947  -0.9353  -0.2121  -0.0375  -0.1147   0.1422
(     4) (     5) (    10) (    13) (    12) (     7)
S=0.203  S=0.010  S=0.278  S=0.452  S=0.361  S=0.380

99.0000   0.3983   0.5829  -0.1523  -0.0954   0.4948
(     4) (     5) (    10) (    13) (    12) (     7)
S=*****  S=0.253  S=0.038  S=0.310  S=0.384  S=0.129

99.0000  99.0000  99.0000   0.2428  -0.1117  -0.1316
(     4) (     5) (    10) (    13) (    12) (     7)
S=*****  S=*****  S=*****  S=0.212  S=0.365  S=0.389

-0.3008   0.1151   0.3806  -0.2532  -0.4645  -0.1271
(     3) (     5) (     8) (    10) (    10) (     5)
S=0.204  S=0.427  S=0.176  S=0.240  S=0.088  S=0.419


OCR      OCR      OCR      OCR      OCR      OCR

-0.9101  -0.4257  -0.3231   0.1659   0.1659   0.1659
(     3) (     3) (     3) (     3) (     3) (     3)
S=0.136  S=0.360  S=0.395  S=0.447  S=0.447  S=0.447

 0.1768   0.2457   0.2457   0.2684   0.2684   0.2684
(     3) (     3) (     3) (     3) (     3) (     3)
S=0.443  S=0.421  S=0.421  S=0.414  S=0.414  S=0.414

-0.9744  -0.9744  -0.9572  -0.6810  -0.6810  -0.6810
(     3) (     3) (     3) (     3) (     3) (     3)
S=0.072  S=0.072  S=0.093  S=0.262  S=0.262  S=0.262

99.0000  99.0000  99.0000   0.6820   0.6820   0.6820
(     3) (     3) (     3) (     3) (     3) (     3)
S=*****  S=*****  S=*****  S=0.261  S=0.261  S=0.261

 0.9563   0.9563   0.9563   0.9563   0.9563   0.9563
(     3) (     3) (     3) (     3) (     3) (     3)
S=0.094  S=0.094  S=0.094  S=0.094  S=0.094  S=0.094


OCT03    OCT06    OCT09    OCT12    OCT15    OCT18

 0.3380   0.2971   0.5818   0.1514  -0.0395   0.0677
(     7) (     6) (    10) (    13) (    14) (    12)
S=0.229  S=0.284  S=0.039  S=0.311  S=0.447  S=0.417

 0.3380   0.2969   0.6062   0.1122   0.0774   0.1963
(     7) (     6) (    10) (    13) (    14) (    12)
S=0.229  S=0.284  S=0.032  S=0.358  S=0.396  S=0.270

99.0000  -0.0698  -0.5200   0.1617  -0.2425  -0.2913
(     7) (     6) (    10) (    13) (    14) (    12)
S=*****  S=0.448  S=0.062  S=0.299  S=0.202  S=0.179

99.0000  99.0000  99.0000  -0.2907  -0.0535   0.1059
(     7) (     6) (    10) (    13) (    14) (    12)
S=*****  S=*****  S=*****  S=0.168  S=0.428  S=0.372

 0.6951   0.8049  -0.4938  -0.3313  -0.2085  -0.2029
(     4) (     4) (     7) (     9) (    10) (     8)
S=0.152  S=0.098  S=0.132  S=0.192  S=0.282  S=0.315
```

CE AND DRIVE vs. OUTCOMES

Sylvania - Mid GPA

	OAC03	OAC06	OAC09	OAC12	OAC15	OAC18	ORC03	ORC06	ORC09	ORC12	ORC15	ORC18
CETOT	0.0819 (5) S=0.448	-0.2317 (11) S=0.247	0.1540 (9) S=0.346	0.0208 (9) S=0.479	0.2354 (8) S=0.287	0.3799 (9) S=0.157	0.6507 (5) S=0.117	-0.1067 (11) S=0.377	0.5917 (9) S=0.047	0.4516 (9) S=0.111	0.6320 (8) S=0.046	0.4161 (9) S=0.133
CETCH	0.0819 (5) S=0.448	-0.2379 (11) S=0.241	0.0187 (9) S=0.481	0.0094 (9) S=0.490	0.1116 (8) S=0.396	0.1908 (9) S=0.311	0.6507 (5) S=0.117	-0.1043 (11) S=0.380	0.5616 (9) S=0.058	0.4089 (9) S=0.137	0.5754 (8) S=0.068	0.3406 (9) S=0.185
CEBUS	99.0000 (5) S=*****	0.1973 (11) S=0.280	0.6437 (9) S=0.031	0.0383 (9) S=0.461	0.4877 (8) S=0.110	0.5061 (9) S=0.082	99.0000 (5) S=*****	-0.0516 (11) S=0.440	0.3713 (9) S=0.163	0.1022 (9) S=0.397	0.1683 (8) S=0.345	0.2563 (9) S=0.254
CEOTH	99.0000 (5) S=*****	99.0000 (11) S=*****	99.0000 (9) S=*****	99.0000 (9) S=*****	-0.1704 (8) S=0.343	-0.1024 (9) S=0.397	99.0000 (5) S=*****	99.0000 (11) S=*****	99.0000 (9) S=*****	99.0000 (9) S=*****	0.0361 (8) S=0.466	0.1039 (9) S=0.395
DRIVE	0.1025 (5) S=0.435	-0.1665 (10) S=0.323	0.2108 (9) S=0.293	0.5501 (7) S=0.100	0.7349 (5) S=0.048	0.7590 (5) S=0.040	0.1427 (5) S=0.409	0.3428 (10) S=0.166	0.1319 (9) S=0.368	-0.1075 (7) S=0.409	0.4443 (6) S=0.189	0.5391 (6) S=0.135

	OSP03	OSP06	OSP09	OSP12	OSP15	OSP18	OCR	OCR	OCR	OCR	OCR	OCR
CETOT	-0.2597 (6) S=0.310	-0.1551 (13) S=0.306	0.4719 (12) S=0.061	0.0574 (13) S=0.426	-0.0141 (11) S=0.484	-0.6983 (10) S=0.012	-0.0343 (4) S=0.483	0.6224 (4) S=0.189	0.6753 (4) S=0.162	0.7781 (4) S=0.111	0.7670 (4) S=0.116	0.5213 (4) S=0.239
CETCH	-0.2597 (6) S=0.310	-0.1475 (13) S=0.315	0.2913 (12) S=0.179	-0.1830 (13) S=0.275	-0.1650 (11) S=0.314	-0.6105 (10) S=0.030	-0.0343 (4) S=0.483	0.6224 (4) S=0.189	0.6753 (4) S=0.162	0.6753 (4) S=0.162	0.6989 (4) S=0.151	0.5579 (4) S=0.221
CEBUS	99.0000 (6) S=*****	-0.1837 (13) S=0.274	0.9156 (12) S=0.001	0.5528 (13) S=0.001	0.5606 (11) S=0.036	-0.3396 (10) S=0.169	99.0000 (4) S=*****	99.0000 (4) S=*****	99.0000 (4) S=*****	-0.0343 (4) S=0.483	-0.0343 (4) S=0.483	0.1166 (4) S=0.442
CEOTH	99.0000 (6) S=*****	99.0000 (13) S=*****	99.0000 (12) S=*****	-0.1062 (13) S=0.365	-0.1681 (11) S=0.311	-0.3606 (10) S=0.153	99.0000 (4) S=*****	99.0000 (4) S=*****	99.0000 (4) S=*****	0.3385 (4) S=0.331	0.3385 (4) S=0.331	0.1939 (4) S=0.403
DRIVE	0.2500 (5) S=0.343	0.2759 (11) S=0.205	0.2524 (11) S=0.227	0.2811 (10) S=0.216	0.3760 (7) S=0.203	-0.4963 (6) S=0.158	0.7694 (4) S=0.115	0.7694 (4) S=0.115	0.7694 (4) S=0.115	0.7694 (4) S=0.115	0.7694 (4) S=0.115	0.7694 (4) S=0.115

	OCM03	OCM06	OCM09	OCM12	OCM15	OCM18	OCT03	OCT06	OCT09	OCT12	OCT15	OCT18
CETOT	-0.1398 (7) S=0.382	0.0086 (14) S=0.488	-0.1896 (12) S=0.278	0.0760 (13) S=0.403	0.0605 (11) S=0.430	0.0764 (10) S=0.417	-0.1102 (7) S=0.407	0.0259 (14) S=0.465	0.3501 (12) S=0.132	0.2203 (13) S=0.235	0.2523 (11) S=0.227	0.3763 (10) S=0.142
CETCH	-0.1398 (7) S=0.382	-0.0048 (14) S=0.494	-0.1015 (12) S=0.377	0.0814 (13) S=0.396	0.2427 (11) S=0.236	0.3309 (10) S=0.175	-0.1102 (7) S=0.407	0.0065 (14) S=0.491	0.2940 (12) S=0.177	0.1421 (13) S=0.322	0.2799 (11) S=0.202	0.0709 (10) S=0.423
CEBUS	99.0000 (7) S=*****	0.3611 (14) S=0.102	-0.4590 (12) S=0.067	-0.3832 (13) S=0.098	-0.6056 (11) S=0.024	-0.4605 (10) S=0.090	99.0000 (7) S=*****	0.5180 (14) S=0.029	0.3882 (12) S=0.106	-0.2145 (13) S=0.241	-0.3472 (11) S=0.148	0.6077 (10) S=0.031
CEOTH	99.0000 (7) S=*****	99.0000 (14) S=*****	99.0000 (12) S=*****	0.5152 (13) S=0.036	0.1174 (11) S=0.365	0.1481 (10) S=0.342	99.0000 (7) S=*****	99.0000 (14) S=*****	99.0000 (12) S=*****	0.7048 (13) S=0.004	0.4353 (11) S=0.090	0.2588 (10) S=0.235
DRIVE	0.0069 (5) S=0.495	0.1651 (12) S=0.304	-0.0758 (11) S=0.412	0.0767 (10) S=0.417	-0.1161 (7) S=0.402	-0.1296 (6) S=0.403	-0.5458 ([illegible]) S=0.063	-0.0132 (12) S=0.484	0.5104 (11) S=0.054	0.2331 (10) S=0.258	0.5946 (7) S=0.080	0.8953 (6) S=0.008

CE AND DRIVE vs. OUTCOMES
Sylvania - High GPA

```
        OAC03   UAC06   OAC09    OAC12    JAC15    CAC18

CETOT -0.1076 -0.2672 -0.0282  0.0267   0.3537   0.4321
      (   10) (   13) (   14) (   14)  (   14)  (   11)
      S=0.384 S=0.189 S=0.462 S=0.464  S=0.107  S=0.092

CETCH -0.1076 -0.2733 -0.0946  0.0393   0.3559   0.5260
      (   10) (   13) (   14) (   14)  (   14)  (   11)
      S=0.384 S=0.183 S=0.374 S=0.447  S=0.106  S=0.048

CEBUS 99.0000  0.2166  0.4946 -0.0736   0.2007   0.2235
      (   10) (   13) (   14) (   14)  (   14)  (   11)
      S=***** S=0.239 S=0.036 S=0.401  S=0.246  S=0.254

CEOTH 99.0000 99.0000 99.0000 -0.1497  -0.0838  -0.2444
      (   10) (   13) (   14) (   14)  (   14)  (   11)
      S=***** S=***** S=***** S=0.305  S=0.388  S=0.234

DRIVE  0.0179 -0.1377  0.1071  0.0135   0.3108   0.1389
      (    8) (   11) (   13) (   11)  (   12)  (    9)
      S=0.483 S=0.343 S=0.364 S=0.484  S=0.163  S=0.351


        OSPC3   OSP06   OSPC9    OSP12    OSP15    CSP18

CETOT -0.1893 -0.1548  0.1711  0.2099  -0.1545  -0.5754
      (   12) (   15) (   16) (   17)  (   16)  (   14)
      S=0.278 S=0.291 S=0.263 S=0.209  S=0.235  S=0.016

CETCH -0.1893 -0.1485  0.0463  0.1070  -0.2050  -0.5005
      (   12) (   15) (   16) (   17)  (   16)  (   14)
      S=0.278 S=0.299 S=0.432 S=0.341  S=0.223  S=0.034

CEBUS 99.0000 -0.1762  0.9538  0.6242   0.2383  -0.3419
      (   12) (   15) (   16) (   17)  (   16)  (   14)
      S=***** S=0.265 S=0.001 S=0.001  S=0.187  S=0.116

CEOTH 99.0000 99.0000 99.0000  0.0597  -0.1639  -0.3655
      (   12) (   15) (   16) (   17)  (   16)  (   14)
      S=***** S=***** S=***** S=0.410  S=0.272  S=0.099

DRIVE  0.1341  0.2833  0.3121  0.3275   0.3568  -0.2094
      (    8) (   12) (   14) (   13)  (   12)  (   10)
      S=0.376 S=0.185 S=0.139 S=0.137  S=0.127  S=0.281


        OCM03   UCM06   OCM09    OCM12    OCM15    OCM18

CETOT -0.0576 -0.0875 -0.4166 -0.2056   0.0534   0.1282
      (   13) (   17) (   17) (   17)  (   17)  (   14)
      S=0.426 S=0.369 S=0.048 S=0.214  S=0.419  S=0.331

CETCH -0.0576 -0.0955 -0.3658 -0.2133   0.0485   0.0404
      (   13) (   17) (   17) (   17)  (   17)  (   14)
      S=0.426 S=0.358 S=0.074 S=0.206  S=0.427  S=0.445

CEBUS 99.0000  0.2708 -0.4389 -0.2853  -0.2165   0.1532
      (   13) (   17) (   17) (   17)  (   17)  (   14)
      S=***** S=0.147 S=0.039 S=0.134  S=0.202  S=0.301

CEOTH 99.0000 99.0000 99.0000  0.4284   0.2305   0.3688
      (   13) (   17) (   17) (   17)  (   17)  (   14)
      S=***** S=***** S=***** S=0.043  S=0.187  S=0.097

DRIVE  0.5061  0.1483 -0.2979  0.1605   0.1827   0.1910
      (    9) (   13) (   15) (   13)  (   13)  (   10)
      S=0.082 S=0.314 S=0.141 S=0.300  S=0.275  S=0.299
```

APPENDIX 8J

```
ORCC3    ORC0E    ORC09    ORC12    ORC15    ORC18

 0.1158  -0.2294  -0.0840   0.0776  -0.0352   0.4839
(   10)  (   13)  (   14)  (   14)  (   14)  (   11)
S=0.375  S=0.225  S=0.388  S=0.396  S=0.452  S=0.066

 0.1158  -0.2270  -0.1149   0.0691   0.0037   0.4503
(   10)  (   13)  (   14)  (   14)  (   14)  (   11)
S=0.375  S=0.228  S=0.348  S=0.407  S=0.495  S=0.063

99.0000  -0.0304   0.2237   0.0134  -0.1789   0.3887
(   10)  (   13)  (   14)  (   14)  (   14)  (   11)
S=*****  S=0.461  S=0.221  S=0.482  S=0.270  S=0.119

99.0000  99.0000  99.0000   0.2764  -0.0578  -0.0704
(   10)  (   13)  (   14)  (   14)  (   14)  (   11)
S=*****  S=*****  S=*****  S=0.169  S=0.422  S=0.418

-0.3449   0.3213   0.3512   0.0170  -0.0331   0.1970
(    8)  (   11)  (   13)  (   11)  (   12)  (    9)
S=0.201  S=0.168  S=0.120  S=0.480  S=0.459  S=0.306


OCR      CCR      OCR      OCR      OCR      OCR

-0.5638   0.1419   0.1904   0.2820   0.2610   0.2147
(    8)  (    8)  (    8)  (    8)  (    8)  (    8)
S=0.073  S=0.369  S=0.326  S=0.249  S=0.266  S=0.305

 0.0106   0.3718   0.3953   0.3470   0.3201   0.3030
(    8)  (    8)  (    8)  (    8)  (    8)  (    8)
S=0.490  S=0.182  S=0.166  S=0.200  S=0.220  S=0.233

-0.6729  -0.6729  -0.6087  -0.4279  -0.4383  -0.2897
(    8)  (    8)  (    8)  (    8)  (    8)  (    8)
S=0.034  S=0.034  S=0.055  S=0.145  S=0.139  S=0.243

99.0000  99.0000  99.0000   0.2801   0.2533   0.1603
(    8)  (    8)  (    8)  (    8)  (    8)  (    8)
S=*****  S=*****  S=*****  S=0.251  S=0.272  S=0.352

 0.8585   0.8545   0.8585   0.8585   0.8585   0.8585
(    8)  (    8)  (    8)  (    8)  (    8)  (    8)
S=0.003  S=0.003  S=0.003  S=0.003  S=0.003  S=0.003


OCT03    OCT06    OCT09    UCT12    OCT15    OCT18

-0.0909   0.0830   0.5665   0.3029   0.1910   0.5246
(   13)  (   17)  (   17)  (   17)  (   17)  (   14)
S=0.384  S=0.376  S=0.009  S=0.119  S=0.231  S=0.027

-0.0909   0.0692   0.5646   0.2731   0.1909   0.4426
(   13)  (   17)  (   17)  (   17)  (   17)  (   14)
S=0.384  S=0.396  S=0.009  S=0.144  S=0.232  S=0.057

99.0000   0.4302   0.0893  -0.2038  -0.2354   0.2497
(   13)  (   17)  (   17)  (   17)  (   17)  (   14)
S=*****  S=0.042  S=0.367  S=0.216  S=0.181  S=0.195

99.0000  99.0000  99.0000   0.5522   0.2409   0.5001
(   13)  (   17)  (   17)  (   17)  (   17)  (   14)
S=*****  S=*****  S=*****  S=0.011  S=0.176  S=0.034

-0.2431   0.2884   0.2778   0.1952   0.4416   0.4889
(    9)  (   13)  (   15)  (   13)  (   13)  (   10)
S=0.264  S=0.17[illegible]  S=0.158  S=0.261  S=0.065  S=0.076
```

CE AND DRIVE vs. OUTCOMES

Sylvania - Honors

```
        OAC03    OAC06    OAC09    OAC12    OAC15    OAC18
CETOT   0.9997   0.6672   0.7878   0.5944   0.4826   0.7924
       (     3) (    12) (    14) (    20) (    17) (    17)
       S=0.008  S=0.009  S=0.001  S=0.003  S=0.025  S=0.001

CETCH   0.9524   0.6737   0.8140   0.6251   0.4636   0.5704
       (     3) (    12) (    14) (    20) (    17) (    17)
       S=0.099  S=0.008  S=0.001  S=0.002  S=0.030  S=0.008

CEBUS  99.0000  -0.2101  -0.1920  -0.1190   0.2462   0.6391
       (     3) (    12) (    14) (    20) (    17) (    17)
       S=*****  S=0.256  S=0.255  S=0.309  S=0.170  S=0.003

CEOTH  -0.2122  -0.1272  -0.0760   0.2237   0.2094   0.1676
       (     3) (    12) (    14) (    20) (    17) (    17)
       S=0.432  S=0.347  S=0.398  S=0.172  S=0.210  S=0.260

DRIVE   0.9524   0.4168   0.2224   0.1937   0.0154   0.3852
       (     3) (    11) (    11) (    15) (    12) (    11)
       S=0.099  S=0.101  S=0.255  S=0.245  S=0.481  S=0.121


        OSP03    OSP06    OSP09    OSP12    OSP15    OSP18
CETOT  -0.0153  -0.2417  -0.2300  -0.0595   0.0434   0.0655
       (    12) (    21) (    23) (    25) (    26) (    23)
       S=0.481  S=0.146  S=0.146  S=0.389  S=0.417  S=0.383

CETCH  -0.0080  -0.2310  -0.2372  -0.1684  -0.1018   0.1405
       (    12) (    21) (    23) (    25) (    26) (    23)
       S=0.490  S=0.157  S=0.138  S=0.210  S=0.310  S=0.261

CEBUS  99.0000  -0.1057   0.2355   0.5187   0.5230  -0.0087
       (    12) (    21) (    23) (    25) (    26) (    23)
       S=*****  S=0.324  S=0.140  S=0.004  S=0.003  S=0.484

CEOTH  -0.1489  -0.1227  -0.1468  -0.1130  -0.0532  -0.1149
       (    12) (    21) (    23) (    25) (    26) (    23)
       S=0.322  S=0.298  S=0.252  S=0.295  S=0.325  S=0.301

DRIVE  -0.5776  -0.0673   0.0279   0.3091   0.4515   0.4338
       (     8) (    16) (    16) (    16) (    15) (    13)
       S=0.032  S=0.402  S=0.459  S=0.122  S=0.046  S=0.069


        OCM03    OCM06    OCM09    OCM12    OCM15    OCM18
CETOT   0.1330   0.1837  -0.2177   0.0601  -0.2427  -0.3710
       (    13) (    21) (    23) (    26) (    26) (    23)
       S=0.332  S=0.213  S=0.159  S=0.385  S=0.116  S=0.041

CETCH   0.1267   0.1493  -0.2144   0.1236  -0.1119  -0.3333
       (    13) (    21) (    23) (    26) (    26) (    23)
       S=0.340  S=0.259  S=0.163  S=0.274  S=0.293  S=0.060

CEBUS  99.0000   0.1825  -0.2908  -0.2690  -0.3980  -0.3505
       (    13) (    21) (    23) (    26) (    26) (    23)
       S=*****  S=0.214  S=0.089  S=0.092  S=0.022  S=0.051

CEOTH   0.1120   0.1662   0.2792  -0.0067  -0.1346   0.1144
       (    13) (    21) (    23) (    26) (    26) (    23)
       S=0.358  S=0.236  S=0.099  S=0.487  S=0.256  S=0.302

DRIVE  -0.1956   0.1562   0.0659  -0.2366  -0.1329  -0.6877
       (     9) (    15) (    15) (    17) (    15) (    13)
       S=0.307  S=0.282  S=0.404  S=0.180  S=0.321  S=0.005
```

APPENDIX 8K

```
 ORC03    ORC06    ORC09    ORC12    ORC15    ORC18

 0.9449  -0.0009  -0.1911   0.1290   0.4919   0.2085
(     3) (    12) (    14) (    20) (    17) (    17)
S=0.106  S=0.499  S=0.256  S=0.294  S=0.022  S=0.211

 1.0000  -0.0095  -0.1741   0.0639   0.4580   0.1667
(     3) (    12) (    14) (    20) (    17) (    17)
S=0.001  S=0.488  S=0.276  S=0.395  S=0.032  S=0.261

99.0000   0.2224  -0.1047   0.0967   0.3211   0.1365
(     3) (    12) (    14) (    20) (    17) (    17)
S=*****  S=0.244  S=0.361  S=0.343  S=0.104  S=0.301

-0.5000  -0.0920  -0.0609   0.1927   0.0952  -0.0164
(     3) (    12) (    14) (    20) (    17) (    17)
S=0.333  S=0.388  S=0.418  S=0.208  S=0.358  S=0.475

 1.0000   0.1561  -0.1652   0.1160   0.5713   0.5747
(     3) (    11) (    11) (    15) (    12) (    11)
S=0.001  S=0.313  S=0.314  S=0.340  S=0.026  S=0.032


 OCR      OCR      OCR      OCR      OCR      OCR

 0.2559   0.3040   0.3072   0.3085   0.3139   0.3053
(    28) (    28) (    28) (    28) (    28) (    28)
S=0.094  S=0.058  S=0.056  S=0.055  S=0.052  S=0.057

 0.2559   0.3040   0.3045   0.3045   0.3045   0.3033
(    28) (    28) (    28) (    28) (    28) (    28)
S=0.094  S=0.058  S=0.058  S=0.058  S=0.058  S=0.058

99.0000  99.0000   0.2488   0.2593   0.2900   0.2833
(    28) (    28) (    28) (    28) (    28) (    28)
S=*****  S=*****  S=0.101  S=0.091  S=0.067  S=0.072

99.0000  99.0000  99.0000  99.0000  99.0000  99.0000
(    28) (    28) (    28) (    28) (    28) (    28)
S=*****  S=*****  S=*****  S=*****  S=*****  S=*****

 0.3861   0.3851   0.3861   0.3861   0.3861   0.3861
(    16) (    16) (    16) (    16) (    16) (    16)
S=0.070  S=0.070  S=0.070  S=0.070  S=0.070  S=0.070


 OCT03    OCT06    OCT09    OCT12    OCT15    OCT18

-0.1548  -0.0350  -0.0106  -0.2527  -0.3751   0.0370
(    13) (    21) (    23) (    26) (    26) (    23)
S=0.307  S=0.440  S=0.481  S=0.106  S=0.030  S=0.434

-0.1746  -0.0894  -0.0300  -0.2461  -0.2409   0.3002
(    13) (    21) (    23) (    26) (    26) (    23)
S=0.284  S=0.350  S=0.446  S=0.113  S=0.118  S=0.082

99.0000  -0.0815   0.2732   0.0700  -0.4153  -0.3903
(    13) (    21) (    23) (    26) (    26) (    23)
S=*****  S=0.363  S=0.104  S=0.367  S=0.017  S=0.033

 0.4361   0.5021  -0.1134  -0.1829  -0.1505  -0.0620
(    13) (    21) (    23) (    26) (    26) (    23)
S=0.068  S=0.010  S=0.303  S=0.186  S=0.231  S=0.389

 0.3450   0.1703   0.1141  -0.0598  -0.1480  -0.4847
(     9) (    15) (    16) (    17) (    15) (    13)
S=0.065  S=0.264  S=0.337  S=0.410  S=0.299  S=0.047
```

<u>CE AND DRIVE vs. OUTCOMES</u>

Sylvania - No Honors

```
        OAC03   OAC06   OAC09   OAC12   JAC15   OAC18

CETOT -0.2071  0.1973  0.8081  0.2009  0.2478  0.8237
      (     6) (     9) (     8) (    10) (     5) (     6)
      S=0.347 S=0.305 S=0.008 S=0.289 S=0.344 S=0.022

CETCH  0.0059  0.2109  0.8175  0.4669  0.1967  0.7688
      (     6) (     9) (     8) (    10) (     5) (     6)
      S=0.496 S=0.293 S=0.007 S=0.087 S=0.376 S=0.037

CEBUS 99.0000 99.0000 -0.3346 -0.1730  0.2459  0.8968
      (     6) (     9) (     8) (    10) (     5) (     6)
      S=***** S=***** S=0.209 S=0.316 S=0.345 S=[illegible].008

CEOTH -0.2120 -0.1929 -0.1448  0.1446  0.1942  0.2860
      (     6) (     9) (     8) (    10) (     5) (     6)
      S=0.343 S=0.309 S=0.366 S=0.345 S=0.377 S=0.291

DRIVE -0.1694  0.0709  0.2178  0.0424  0.2489  0.7871
      (     6) (     9) (     8) (    10) (    -5) (     6)
      S=0.374 S=0.428 S=0.302 S=0.454 S=0.343 S=0.032


        OSP03   OSP06   OSPC9   OSP12   OSP15   OSP18

CETOT  0.5590 -0.1982 -0.2754 -0.0437  0.1606  0.1542
      (     9) (    12) (    13) (    11) (     9) (     7)
      S=0.059 S=0.268 S=0.181 S=0.449 S=0.321 S=0.371

CETCH  0.552[illegible] -0.1584 -0.2738 -0.1907  0.0237  0.3264
      (     9) (    12) (    13) (    11) (     9) (     7)
      S=0.061 S=0.268 S=0.183 S=0.287 S=0.476 S=0.237

CEBUS 99.0000 99.0000  0.2665  0.8741  0.3927 -0.0167
      (     9) (    12) (    13) (    11) (     9) (     7)
      S=***** S=***** S=0.189 S=0.001 S=0.148 S=0.486

CEOTH  0.1696  0.0381 -0.1446 -0.0425  0.4831 -0.1283
      (     9) (    12) (    13) (    11) (     9) (     7)
      S=0.331 S=0.453 S=0.319 S=0.451 S=0.094 S=0.392

DRIVE -0.0392  0.3765  0.3273  0.2575 -0.4623 -0.0664
      (     9) (    12) (    13) (    11) (     9) (     7)
      S=0.460 S=0.114 S=0.137 S=0.222 S=0.094 S=0.444


        OCM03   UCM06   OCM09   OCM12   OCM15   OCM18

CETOT  0.0380 -0.3572 -0.2248 -0.1757 -0.4029 -0.2456
      (    10) (    13) (    13) (    12) (     9) (     7)
      S=0.459 S=0.115 S=0.230 S=0.292 S=0.141 S=0.298

CETCH  0.0369 -0.3455 -0.2401 -0.1094 -0.3432 -0.3953
      (    10) (    13) (    13) (    12) (     9) (     7)
      S=0.460 S=0.124 S=0.215 S=0.367 S=0.183 S=0.190

CEBUS 99.0000 99.0000 -0.2148 -0.3522 -0.1235 -0.0749
      (    10) (    13) (    13) (    12) (     9) (     7)
      S=***** S=***** S=0.240 S=0.131 S=0.376 S=0.437

CEOTH  0.0353 -0.0685  0.2423 -0.0291 -0.2372  0.1069
      (    10) (    13) (    13) (    12) (     9) (     7)
      S=0.461 S=0.412 S=0.213 S=0.464 S=0.269 S=0.410

DRIVE  0.0632 -0.3385 -0.3484  0.1202  0.5071 -0.0294
      (    10) (    13) (    13) (    12) (     9) (     7)
      S=0.431 S=0.129 S=0.122 S=0.355 S=0.082 S=0.475
```

```
  ORC03   ORCC6   ORCC9   ORC12   ORC15   ORC18

-0.3899  0.7760 -0.2337  0.2353  0.3202  0.0250
(     6) (     9) (     8) (    10) (     5) (     6)
S=0.222 S=0.007 S=0.289 S=0.256 S=0.300 S=0.481

-0.4236  0.7664 -0.2096  0.1460  0.3766 -0.0001
(     6) (     9) (     8) (    10) (     5) (     6)
S=0.201 S=0.008 S=0.309 S=0.344 S=0.266 S=0.500

99.0000 99.0000  0.9510  0.0632  0.2767  0.0225
(     6) (     9) (     8) (    10) (     5) (     6)
S=***** S=***** S=0.001 S=0.431 S=0.326 S=0.483

-0.2036 -0.0600 -0.2899  0.2109  0.2449  0.6109
(     6) (     9) (     8) (    10) (     5) (     6)
S=0.349 S=0.439 S=0.243 S=0.279 S=0.346 S=0.099

-0.6521 -0.1010  0.3679  0.1587  0.1723  0.0177
(     6) (     9) (     8) (    10) (     5) (     6)
S=0.064 S=0.398 S=0.185 S=0.331 S=0.391 S=0.487


  CCR     OCR     OCR     OCR     OCR     OCR

-0.5481 -0.5300 -0.5300 -0.5116 -0.6732 -0.6559
(    10) (    10) (    10) (    10) (    10) (    10)
S=0.050 S=0.058 S=0.058 S=0.065 S=0.016 S=0.020

-0.3716 -0.0766 -0.0766 -0.0766 -0.4646 -0.4556
(    10) (    10) (    10) (    10) (    10) (    10)
S=0.145 S=0.417 S=0.417 S=0.417 S=0.088 S=0.093

-0.5571 -0.5571 -0.5571 -0.5439 -0.4874 -0.6281
(    10) (    10) (    10) (    10) (    10) (    10)
S=0.047 S=0.047 S=0.047 S=0.052 S=0.077 S=0.026

99.0000 99.[illegible] 99.0000 99.0000 99.0000 -0.4397
(    10) (    10) (    10) (    10) (    10) (    10)
S=***** S=***** S=***** S=***** S=***** S=0.102

 0.4256  0.4256  0.4256  0.4256  0.4256  0.4256
(    10) (    10) (    10) (    10) (    10) (    10)
S=0.110 S=0.110 S=0.110 S=0.110 S=0.110 S=0.110


  OCT03   OCT06   OCT09   OCT12   OCT15   OCT18

-0.0794  0.3910  0.0733 -0.1190 -0.1047  0.4163
(    10) (    13) (    13) (    12) (     9) (     7)
S=0.414 S=0.093 S=0.406 S=0.356 S=0.394 S=0.176

-0.0771  0.3877  0.0966 -0.1194 -0.0851  0.4908
(    10) (    13) (    13) (    12) (     9) (     7)
S=0.416 S=0.095 S=0.377 S=0.356 S=0.414 S=0.132

99.0000 99.0000  0.1049  0.3070 -0.0603  0.1482
(    10) (    13) (    13) (    12) (     9) (     7)
S=***** S=***** S=0.367 S=0.166 S=0.439 S=0.376

-0.0788 -0.0468 -0.2859 -0.3800 -0.0449  0.0566
(    10) (    13) (    13) (    12) (     9) (     7)
S=0.414 S=0.440 S=0.172 S=0.112 S=0.454 S=0.452

-0.0653  0.1220  0.3318  0.5160  0.2286  0.4958
(    10) (    13) (    13) (    12) (     9) (     7)
S=0.429 S=0.346 S=0.134 S=0.043 S=0.277 S=0.129
```

CE AND DRIVE vs. OUTCOMES

Sylvania - Low IPR

```
       OAC03    OAC06    OAC09    OAC12    OAC15    OAC18

CETOT  99.0000  99.0000   1.0000  99.0000  99.0000  99.0000
       (     0) (     0) (     2) (     1) (     1) (     1)
       S=****** S=****** S=****** S=****** S=****** S=******

CETCH  99.0000  99.0000   1.0000  99.0000  99.0000  99.0000
       (     0) (     0) (     2) (     1) (     1) (     1)
       S=****** S=****** S=****** S=****** S=****** S=******

CEBUS  99.0000  99.0000  -1.0000  99.0000  99.0000  99.0000
       (     0) (     0) (     2) (     1) (     1) (     1)
       S=****** S=****** S=****** S=****** S=****** S=******

CEOTH  99.0000  99.0000  99.0000  99.0000  99.0000  99.0000
       (     0) (     0) (     2) (     1) (     1) (     1)
       S=****** S=****** S=****** S=****** S=****** S=******

DRIVE  99.0000  99.0000  -1.0000  99.0000  99.0000  99.0000
       (     0) (     0) (     2) (     1) (     1) (     1)
       S=****** S=****** S=****** S=****** S=****** S=******


       OSP03    OSP06    OSP09    OSP12    OSP15    OSP18

CETOT  99.0000  99.0000  -1.0000  99.0000  99.0000  99.0000
       (     0) (     0) (     2) (     1) (     1) (     1)
       S=****** S=****** S=****** S=****** S=****** S=******

CETCH  99.0000  99.0000  -1.0000  99.0000  99.0000  99.0000
       (     0) (     0) (     2) (     1) (     1) (     1)
       S=****** S=****** S=****** S=****** S=****** S=******

CEBUS  99.0000  99.0000   1.0000  99.0000  99.0000  99.0000
       (     0) (     0) (     2) (     1) (     1) (     1)
       S=****** S=****** S=****** S=****** S=****** S=******

CEOTH  99.0000  99.0000  99.0000  99.0000  99.0000  99.0000
       (     0) (     0) (     2) (     1) (     1) (     1)
       S=****** S=****** S=****** S=****** S=****** S=******

DRIVE  99.0000  99.0000   1.0000  99.0000  99.0000  99.0000
       (     0) (     0) (     2) (     1) (     1) (     1)
       S=****** S=****** S=****** S=****** S=****** S=******


       OCM03    OCM06    OCM09    OCM12    OCM15    OCM18

CETOT  99.0000  99.0000   1.0000  99.0000  99.0000  99.0000
       (     0) (     0) (     2) (     1) (     1) (     1)
       S=****** S=****** S=****** S=****** S=****** S=******

CETCH  99.0000  99.0000   1.0000  99.0000  99.0000  99.0000
       (     0) (     0) (     2) (     1) (     1) (     1)
       S=****** S=****** S=****** S=****** S=****** S=******

CEBUS  99.0000  99.0000  -1.0000  99.0000  99.0000  99.0000
       (     0) (     0) (     2) (     1) (     1) (     1)
       S=****** S=****** S=****** S=****** S=****** S=******

CEOTH  99.0000  99.0000  99.0000  99.0000  99.0000  99.0000
       (     0) (     0) (     2) (     1) (     1) (     1)
       S=****** S=****** S=****** S=****** S=****** S=******

DRIVE  99.0000  99.0000  -1.0000  99.0000  99.0000  99.0000
       (     0) (     0) (     2) (     1) (     1) (     1)
       S=****** S=****** S=****** S=****** S=****** S=******
```

```
ORC03    ORC06    ORC09    ORC12    ORC15    ORC18

99.0000  99.0000  -1.0000  99.0000  99.0000  99.0000
(     0) (     0) (     2) (     1) (     1) (     1)
S=****** S=****** S=****** S=****** S=****** S=******

99.0000  99.0000  -1.0000  99.0000  99.0000  99.0000
(     0) (     0) (     2) (     1) (     1) (     1)
S=****** S=****** S=****** S=****** S=****** S=******

99.0000  99.0000   1.0000  99.0000  99.0000  99.0000
(     0) (     0) (     2) (     1) (     1) (     1)
S=****** S=****** S=****** S=****** S=****** S=******

99.0000  99.0000  99.0000  99.0000  99.0000  99.0000
(     0) (     0) (     2) (     1) (     1) (     1)
S=****** S=****** S=****** S=****** S=****** S=******

99.0000  99.0000   1.0000  99.0000  99.0000  99.0000
(     0) (     0) (     2) (     1) (     1) (     1)
S=****** S=****** S=****** S=****** S=****** S=******


OCR      OCR      OCR      OCR      OCR      OCR

99.0000  99.0000   1.0000   1.0000   1.0000   1.0000
(     2) (     2) (     2) (     2) (     2) (     2)
S=****** S=****** S=****** S=****** S=****** S=******

99.0000  99.0000  99.0000  99.0000  99.0000  99.0000
(     2) (     2) (     2) (     2) (     2) (     2)
S=****** S=****** S=****** S=****** S=****** S=******

99.0000  99.0000   1.0000   1.0000   1.0000   1.0000
(     2) (     2) (     2) (     2) (     2) (     2)
S=****** S=****** S=****** S=****** S=****** S=******

99.0000  99.0000  99.0000   1.0000   1.0000   1.0000
(     2) (     2) (     2) (     2) (     2) (     2)
S=****** S=****** S=****** S=****** S=****** S=******

 1.0000   1.0000   1.0000   1.0000   1.0000   1.0000
(     2) (     2) (     2) (     2) (     2) (     2)
S=****** S=****** S=****** S=****** S=****** S=******


OCT03    OCT06    OCT09    OCT12    OCT15    OCT18

99.0000  99.0000   1.0000  99.0000  99.0000  99.0000
(     0) (     0) (     2) (     1) (     1) (     1)
S=****** S=****** S=****** S=****** S=****** S=******

99.0000  99.0000   1.0000  99.0000  99.0000  99.0000
(     0) (     0) (     2) (     1) (     1) (     1)
S=****** S=****** S=****** S=****** S=****** S=******

99.0000  99.0000  -1.0000  99.0000  99.0000  99.0000
(     0) (     0) (     2) (     1) (     1) (     1)
S=****** S=****** S=****** S=****** S=****** S=******

99.0000  99.0000  99.0000  99.0000  99.0000  99.0000
(     0) (     0) (     2) (     1) (     1) (     1)
S=****** S=****** S=****** S=****** S=****** S=******

99.0000  99.0000  -1.0000  99.0000  99.0000  99.0000
(     0) (     0) (     2) (     1) (     1) (     1)
S=****** S=****** S=****** S=****** S=****** S=******
```

CE AND DRIVE vs. OUTCOMES

Sylvania - Mid IPR

```
        OAC03    OAC06    OAC09    OAC12    OAC15    OAC18           ORC03    ORC06    ORC09    ORC12    ORC15    ORC18

CETOT   0.3141   0.3607   0.2735  -0.1840   0.1750   0.6097          0.9736  -0.3283  -0.2898  -0.0132   0.2688   0.7296
       (     4) (     9) (     9) (    10) (    12) (     9)        (     4) (     9) (     9) (    10) (    12) (     9)
       S=0.343  S=0.170  S=0.238  S=0.305  S=0.293  S=0.041         S=0.013  S=0.194  S=0.225  S=0.486  S=0.199  S=0.013

CETCH   0.3141   0.3519   0.2128  -0.0263   0.2119   0.3372          0.9736  -0.3081  -0.3523   0.1765   0.3376   0.6361
       (     4) (     9) (     9) (    10) (    12) (     9)        (     4) (     9) (     9) (    10) (    12) (     9)
       S=0.343  S=0.176  S=0.291  S=0.471  S=0.254  S=0.187         S=0.013  S=0.210  S=0.176  S=0.313  S=0.142  S=0.033

CEBUS  99.0000  -0.0024   0.3923  -0.3036   0.0027   0.7368         99.0000  -0.1141  -0.1058  -0.3212   0.0110   0.6177
       (     4) (     9) (     9) (    10) (    12) (     9)        (     4) (     9) (     9) (    10) (    12) (     9)
       S=****** S=0.498  S=0.148  S=0.197  S=0.457  S=0.012         S=****** S=0.385  S=0.389  S=0.183  S=0.486  S=0.038

CEOTH  99.0000  99.0000  99.0000  99.0000   0.0721  -0.4867         99.0000  99.0000  99.0000  99.0000  -0.1558  -0.6811
       (     4) (     9) (     9) (    10) (    12) (     9)        (     4) (     9) (     9) (    10) (    12) (     9)
       S=****** S=****** S=****** S=****** S=0.412  S=0.092         S=****** S=****** S=****** S=****** S=0.314  S=0.022

DRIVE  99.0000   0.3434   0.2657  -0.4756   0.2791   0.2392         99.0000  -0.0681   0.0526  -0.0399   0.0682   0.5523
       (     4) (     9) (     9) (    10) (    12) (     9)        (     4) (     9) (     9) (    10) (    12) (     9)
       S=****** S=0.183  S=0.245  S=0.080  S=0.190  S=0.268         S=****** S=0.431  S=0.447  S=0.456  S=0.417  S=0.062


        OSP03    OSP06    OSP09    OSP12    OSP15    OSP18           OCR      OCR      OCR      OCR      OCR      OCR

CETOT  -0.2179  -0.2615   0.5166   0.3759   0.2538   0.4883          0.3862   0.4001   0.4166   0.4166   0.4125   0.4935
       (     5) (    12) (    11) (    11) (    12) (    10)        (     6) (     6) (     6) (     6) (     6) (     6)
       S=0.362  S=0.206  S=0.052  S=0.127  S=0.213  S=0.076         S=0.225  S=0.216  S=0.206  S=0.206  S=0.208  S=0.160

CETCH  -0.2179  -0.2222   0.3487   0.0779   0.0889   0.5861          0.3862   0.4001   0.4041   0.4041   0.4041   0.5286
       (     5) (    12) (    11) (    11) (    12) (    10)        (     6) (     6) (     6) (     6) (     6) (     6)
       S=0.362  S=0.244  S=0.147  S=0.410  S=0.392  S=0.037         S=0.225  S=0.216  S=0.213  S=0.213  S=0.213  S=0.140

CEBUS  99.0000  -0.3103   0.8347   0.5944   0.3456   0.1699         99.0000  99.0000   0.3862   0.3862   0.4310   0.3054
       (     5) (    12) (    11) (    11) (    12) (    10)        (     6) (     6) (     6) (     6) (     6) (     6)
       S=****** S=0.163  S=0.001  S=0.027  S=0.136  S=0.319         S=****** S=****** S=0.225  S=0.225  S=0.197  S=0.278

CEOTH  99.0000  99.0000  99.0000  99.0000  -0.3206  -0.4662         99.0000  99.0000  99.0000  99.0000  99.0000  99.0000
       (     5) (    12) (    11) (    11) (    12) (    10)        (     6) (     6) (     6) (     6) (     6) (     6)
       S=****** S=****** S=****** S=****** S=0.155  S=0.087         S=****** S=****** S=****** S=****** S=****** S=******

DRIVE  99.0000  -0.2034   0.2484   0.3423   0.6002   0.5233          0.8844   0.8844   0.8844   0.8844   0.8844   0.8844
       (     5) (    12) (    11) (    11) (    12) (    10)        (     6) (     6) (     6) (     6) (     6) (     6)
       S=****** S=0.263  S=0.231  S=0.151  S=0.020  S=0.060         S=0.010  S=0.010  S=0.010  S=0.010  S=0.010  S=0.010


        OCM03    OCM06    OCM09    OCM12    OCM15    OCM18           OCT03    OCT06    OCT09    OCT12    OCT15    OCT18

CETOT  -0.5861  -0.0959  -0.5692  -0.3436  -0.4444  -0.5280          0.2376   0.2591   0.8213   0.2156  -0.2823   0.0593
       (     5) (    12) (    11) (    11) (    12) (    10)        (     5) (    12) (    11) (    11) (    12) (    10)
       S=0.150  S=0.383  S=0.034  S=0.150  S=0.074  S=0.058         S=0.350  S=0.208  S=0.001  S=0.262  S=0.187  S=0.435

CETCH  -0.5861  -0.1230  -0.4935  -0.2937  -0.3114  -0.2765          0.2376   0.2192   0.8057   0.2546   0.0259   0.0658
       (     5) (    12) (    11) (    11) (    12) (    10)        (     5) (    12) (    11) (    11) (    12) (    10)
       S=0.150  S=0.352  S=0.061  S=0.190  S=0.162  S=0.220         S=0.350  S=0.247  S=0.001  S=0.225  S=0.468  S=0.428

CEBUS  99.0000   0.2975  -0.5587  -0.1664  -0.3973  -0.6614         99.0000   0.3174   0.4975  -0.0145  -0.5214  -0.0574
       (     5) (    12) (    11) (    11) (    12) (    10)        (     5) (    12) (    11) (    11) (    12) (    10)
       S=****** S=0.174  S=0.037  S=0.312  S=0.100  S=0.019         S=****** S=0.157  S=0.060  S=0.483  S=0.041  S=0.437

CEOTH  99.0000  99.0000  99.0000  99.0000   0.6586   0.7023         99.0000  99.0000  99.0000  99.0000  -0.0560   0.2445
       (     5) (    12) (    11) (    11) (    12) (    10)        (     5) (    12) (    11) (    11) (    12) (    10)
       S=****** S=****** S=****** S=****** S=0.010  S=0.012         S=****** S=****** S=****** S=****** S=0.431  S=0.248

DRIVE  99.0000   0.1633  -0.3527  -0.2819  -0.6524  -0.5624         99.0000   0.3644   0.2394   0.3218  -0.1331   0.0250
       (     5) (    12) (    11) (    11) (    12) (    10)        (     5) (    12) (    11) (    11) (    12) (    10)
       S=****** S=0.306  S=0.144  S=0.201  S=0.011  S=0.045         S=****** S=0.122  S=0.239  S=0.167  S=0.340  S=0.473
```

APPENDIX 8N

CE AND DRIVE vs. OUTCOMES

Sylvania -High IPR

APPENDIX 80

```
        OAC03    OAC06    OAC09    OAC12    OAC15    OAC18

CETOT   99.0000  99.0000  99.0000  99.0000  99.0000  99.0000
        (     0) (     0) (     0) (     0) (     0) (     0)
        S=****** S=****** S=****** S=****** S=****** S=******

CETCH   99.0000  99.0000  99.0000  99.0000  99.0000  99.0000
        (     0) (     0) (     0) (     0) (     0) (     0)
        S=****** S=****** S=****** S=****** S=****** S=******

CEBUS   99.0000  99.0000  99.0000  99.0000  99.0000  99.0000
        (     0) (     0) (     0) (     0) (     0) (     0)
        S=****** S=****** S=****** S=****** S=****** S=******

CEOTH   99.0000  99.0000  99.0000  99.0000  99.0000  99.0000
        (     0) (     0) (     0) (     0) (     0) (     0)
        S=****** S=****** S=****** S=****** S=****** S=******

DRIVE   99.0000  99.0000  99.0000  99.0000  99.0000  99.0000
        (     0) (     0) (     0) (     0) (     0) (     0)
        S=****** S=****** S=****** S=****** S=****** S=******
```

```
        OSP03    OSP06    OSP09    OSP12    OSP15    OSP18

CETOT   99.0000  99.0000  99.0000  99.0000  99.0000  99.0000
        (     0) (     0) (     0) (     0) (     0) (     0)
        S=****** S=****** S=****** S=****** S=****** S=******

CETCH   99.0000  99.0000  99.0000  99.0000  99.0000  99.0000
        (     0) (     0) (     0) (     0) (     0) (     0)
        S=****** S=****** S=****** S=****** S=****** S=******

CEBUS   99.0000  99.0000  99.0000  99.0000  99.0000  99.0000
        (     0) (     0) (     0) (     0) (     0) (     0)
        S=****** S=****** S=****** S=****** S=****** S=******

CEOTH   99.0000  99.0000  99.0000  99.0000  99.0000  99.0000
        (     0) (     0) (     0) (     0) (     0) (     0)
        S=****** S=****** S=****** S=****** S=****** S=******

DRIVE   99.0000  99.0000  99.0000  99.0000  99.0000  99.0000
        (     0) (     0) (     0) (     0) (     0) (     0)
        S=****** S=****** S=****** S=****** S=****** S=******
```

```
        OCM03    OCM06    OCM09    OCM12    OCM15    OCM18

CETOT   99.0000  99.0000  99.0000  99.0000  99.0000  99.0000
        (     0) (     0) (     0) (     0) (     0) (     0)
        S=****** S=****** S=****** S=****** S=****** S=******

CETCH   99.0000  99.0000  99.0000  99.0000  99.0000  99.0000
        (     0) (     0) (     0) (     0) (     0) (     0)
        S=****** S=****** S=****** S=****** S=****** S=******

CEBUS   99.0000  99.0000  99.0000  99.0000  99.0000  99.0000
        (     0) (     0) (     0) (     0) (     0) (     0)
        S=****** S=****** S=****** S=****** S=****** S=******

CEOTH   99.0000  99.0000  99.0000  99.0000  99.0000  99.0000
        (     0) (     0) (     0) (     0) (     0) (     0)
        S=****** S=****** S=****** S=****** S=****** S=******

DRIVE   99.0000  99.0000  99.0000  99.0000  99.0000  99.0000
        (     0) (     0) (     0) (     0) (     0) (     0)
        S=****** S=****** S=****** S=****** S=****** S=******
```

```
ORC03    ORC06    ORC09    ORC12    ORC15    ORC18

99.0000  99.0000  99.0000  99.0000  99.0000  99.0000
(     0) (     0) (     0) (     0) (     0) (     0)
S=****** S=****** S=****** S=****** S=****** S=******

99.0000  99.0000  99.0000  99.0000  99.0000  99.0000
(     0) (     0) (     0) (     0) (     0) (     0)
S=****** S=****** S=****** S=****** S=****** S=******

99.0000  99.0000  99.0000  99.0000  99.0000  99.0000
(     0) (     0) (     0) (     0) (     0) (     0)
S=****** S=****** S=****** S=****** S=****** S=******

99.0000  99.0000  99.0000  99.0000  99.0000  99.0000
(     0) (     0) (     0) (     0) (     0) (     0)
S=****** S=****** S=****** S=****** S=****** S=******

99.0000  99.0000  99.0000  99.0000  99.0000  99.0000
(     0) (     0) (     0) (     0) (     0) (     0)
S=****** S=****** S=****** S=****** S=****** S=******
```

```
OCR      OCR      OCR      OCR      OCR      OCR

99.0000  99.0000  99.0000  99.0000  99.0000  99.0000
(     0) (     0) (     0) (     0) (     0) (     0)
S=****** S=****** S=****** S=****** S=****** S=******

99.0000  99.0000  99.0000  99.0000  99.0000  99.0000
(     0) (     0) (     0) (     0) (     0) (     0)
S=****** S=****** S=****** S=****** S=****** S=******

99.0000  99.0000  99.0000  99.0000  99.0000  99.0000
(     0) (     0) (     0) (     0) (     0) (     0)
S=****** S=****** S=****** S=****** S=****** S=******

99.0000  99.0000  99.0000  99.0000  99.0000  99.0000
(     0) (     0) (     0) (     0) (     0) (     0)
S=****** S=****** S=****** S=****** S=****** S=******

99.0000  99.0000  99.0000  99.0000  99.0000  99.0000
(     0) (     0) (     0) (     0) (     0) (     0)
S=****** S=****** S=****** S=****** S=****** S=******
```

```
OCT03    OCT06    OCT09    OCT12    OCT15    OCT18

99.0000  99.0000  99.0000  99.0000  99.0000  99.0000
(     0) (     0) (     0) (     0) (     0) (     0)
S=****** S=****** S=****** S=****** S=****** S=******

99.0000  99.0000  99.0000  99.0000  99.0000  99.0000
(     0) (     0) (     0) (     0) (     0) (     0)
S=****** S=****** S=****** S=****** S=****** S=******

99.0000  99.0000  99.0000  99.0000  99.0000  99.0000
(     0) (     0) (     0) (     0) (     0) (     0)
S=****** S=****** S=****** S=****** S=****** S=******

99.0000  99.0000  99.0000  99.0000  99.0000  99.0000
(     0) (     0) (     0) (     0) (     0) (     0)
S=****** S=****** S=****** S=****** S=****** S=******

99.0000  99.0000  99.0000  99.0000  99.0000  99.0000
(     0) (     0) (     0) (     0) (     0) (     0)
S=****** S=****** S=****** S=****** S=****** S=******
```

CE AND DRIVE vs. OUTCOMES

Sylvania - Low IFR

```
        OAC03    OAC06    OAC09    OAC12    OAC15    OAC18

CETOT  0.0333   0.2505   0.2584  -0.1882   0.0574   0.4065
       (    5)  (    9)  (   12)  (   10)  (    8)  (    6)
       S=0.479  S=0.258  S=0.212  S=0.301  S=0.446  S=0.212

CETCH  0.0333   0.2505   0.2693  -0.1096   0.0129   0.4554
       (    5)  (    9)  (   12)  (   10)  (    8)  (    6)
       S=0.479  S=0.258  S=0.199  S=0.382  S=0.488  S=0.182

CEBUS 99.0000  99.0000  -0.2366  -0.2778   0.0731   0.7536
       (    5)  (    9)  (   12)  (   10)  (    8)  (    6)
       S=*****  S=*****  S=0.230  S=0.219  S=0.432  S=0.042

CEOTH 99.0000  99.0000  -0.2409  -0.1380   0.0480  -0.6389
       (    5)  (    9)  (   12)  (   10)  (    8)  (    6)
       S=*****  S=*****  S=0.225  S=0.352  S=0.455  S=0.086

DRIVE -0.1949   0.0528   0.4018   0.4654   0.0949  -0.4347
       (    5)  (    9)  (   10)  (    7)  (    6)  (    5)
       S=0.377  S=0.446  S=0.125  S=0.146  S=0.429  S=0.232


        OSP03    OSP06    OSP09    OSP12    OSP15    OSP18

CETOT  0.4536  -0.2217  -0.1540   0.1660  -0.1478   0.0204
       (    9)  (   13)  (   15)  (   14)  (   13)  (    9)
       S=0.088  S=0.233  S=0.292  S=0.285  S=0.315  S=0.479

CETCH  0.5068  -0.2119  -0.1583   0.0934  -0.1411   0.1235
       (    9)  (   13)  (   15)  (   14)  (   13)  (    9)
       S=0.082  S=0.244  S=0.287  S=0.375  S=0.323  S=0.376

CEBUS 99.0000  99.0000   0.3036   0.5062  -0.0655  -0.0373
       (    9)  (   13)  (   15)  (   14)  (   13)  (    9)
       S=*****  S=*****  S=0.136  S=0.032  S=0.416  S=0.462

CEOTH -0.3687  -0.1770  -0.1021  -0.1767   0.0425  -0.1896
       (    9)  (   13)  (   15)  (   14)  (   13)  (    9)
       S=0.164  S=0.281  S=0.359  S=0.273  S=0.445  S=0.341

DRIVE -0.2518   0.3411   0.2150   0.2724   0.0562   0.0593
       (    6)  (   10)  (   12)  (   10)  (    9)  (    6)
       S=0.315  S=0.157  S=0.251  S=0.223  S=0.433  S=0.448


        OCM03    OCM06    OCM09    OCM12    OCM15    OCM18

CETOT  0.0703   0.0592  -0.4802  -0.3761  -0.2175  -0.0270
       (   10)  (   14)  (   15)  (   15)  (   13)  (    9)
       S=0.423  S=0.420  S=0.035  S=0.084  S=0.238  S=0.472

CETCH  0.0674   0.0405  -0.4805  -0.3125  -0.1640  -0.3604
       (   10)  (   14)  (   15)  (   15)  (   13)  (    9)
       S=0.427  S=0.445  S=0.035  S=0.128  S=0.296  S=0.170

CEBUS 99.0000  99.0000  -0.2020  -0.3495  -0.1260   0.4078
       (   10)  (   14)  (   15)  (   15)  (   13)  (    9)
       S=*****  S=*****  S=0.235  S=0.101  S=0.341  S=0.138

CEOTH  0.0619   0.1318   0.0788  -0.2348  -0.2145   0.2877
       (   10)  (   14)  (   15)  (   15)  (   13)  (    9)
       S=0.433  S=0.327  S=0.390  S=0.200  S=0.241  S=0.226

DRIVE  0.0185  -0.0892  -0.0593  -0.0995   0.1861  -0.1347
       (    7)  (   11)  (   12)  (   11)  (    9)  (    6)
       S=0.464  S=0.397  S=0.427  S=0.385  S=0.316  S=0.400
```

APPENDIX 8P

```
 ORC03    ORC06    ORC09    ORC12    ORC15    ORC18

-0.4644  -0.1055   0.0121   0.4022   0.1365  -0.3724
(    5)  (    9)  (   12)  (   10)  (    8)  (    6)
S=0.215  S=0.394  S=0.485  S=0.125  S=0.374  S=0.234

-0.4644  -0.1055   0.0254   0.3771   0.3421  -0.4065
(    5)  (    9)  (   12)  (   10)  (    8)  (    6)
S=0.215  S=0.394  S=0.469  S=0.141  S=0.203  S=0.212

99.0000  99.0000   0.6447   0.1320   0.0435  -0.1251
(    5)  (    9)  (   12)  (   10)  (    8)  (    6)
S=*****  S=*****  S=0.012  S=0.358  S=0.459  S=0.407

99.0000  99.0000  -0.3725   0.1311   0.0197   0.0632
(    5)  (    9)  (   12)  (   10)  (    8)  (    6)
S=*****  S=*****  S=0.117  S=0.359  S=0.482  S=0.453

-0.3132   0.3963   0.2542   0.1994   0.3906  -0.2646
(    5)  (    9)  (   10)  (    7)  (    6)  (    5)
S=0.304  S=0.145  S=0.239  S=0.334  S=0.222  S=0.334


 OCR      CCR      OCR      OCR      OCR      OCR

 0.1602   0.1139   0.1139   0.1100  -0.6244  -0.7188
(    8)  (    8)  (    8)  (    8)  (    8)  (    8)
S=0.352  S=0.394  S=0.394  S=0.398  S=0.049  S=0.022

 0.1602   0.1139   0.1139   0.1139  -0.7248  -0.7354
(    8)  (    8)  (    8)  (    8)  (    8)  (    8)
S=0.352  S=0.394  S=0.394  S=0.394  S=0.021  S=0.019

99.0000  99.0000  99.0000   0.1027   0.1570  -0.5169
(    8)  (    8)  (    8)  (    8)  (    8)  (    8)
S=*****  S=*****  S=*****  S=0.404  S=0.355  S=0.095

99.0000  99.0000  99.0000  99.0000  99.0000  -0.7381
(    8)  (    8)  (    8)  (    8)  (    8)  (    8)
S=*****  S=*****  S=*****  S=*****  S=*****  S=0.018

-0.1109  -0.1109  -0.1109  -0.1109  -0.1109  -0.1109
(    7)  (    7)  (    7)  (    7)  (    7)  (    7)
S=0.406  S=0.406  S=0.406  S=0.406  S=0.406  S=0.406


 OCT03    OCT06    OCT09    OCT12    OCT15    OCT18

-0.1539   0.4910   0.3699   0.1915  -0.0677   0.2008
(   10)  (   14)  (   15)  (   15)  (   13)  (    9)
S=0.336  S=0.037  S=0.087  S=0.247  S=0.413  S=0.302

-0.1774   0.4087   0.3609   0.1278   0.0055   0.2489
(   10)  (   14)  (   15)  (   15)  (   13)  (    9)
S=0.312  S=0.073  S=0.093  S=0.325  S=0.493  S=0.259

99.0000  99.0000  -0.0224   0.3617  -0.2443  -0.0452
(   10)  (   14)  (   15)  (   15)  (   13)  (    9)
S=*****  S=*****  S=0.468  S=0.093  S=0.211  S=0.454

 0.5699   0.5595   0.2500   0.1403  -0.1557   0.0330
(   10)  (   14)  (   15)  (   15)  (   13)  (    9)
S=0.043  S=0.019  S=0.184  S=0.309  S=0.306  S=0.466

-0.2272  -0.2246   0.3594   0.1108  -0.0156   0.2637
(    7)  (   11)  (   12)  (   11)  (    9)  (    6)
S=0.312  S=0.233  S=0.126  S=0.373  S=0.484  S=0.307
```

CE AND DRIVE vs. OUTCOMES

Sylvania - Mid IFR

```
        OAC03    OAC06    OAC09    OAC12    OAC15    OAC18
CETOT  99.0000   1.0000  -1.0000   0.5761   0.3108   0.6870
       (     1) (     2) (     2) (     5) (     5) (     4)
       S=****** S=****** S=****** S=0.155  S=0.305  S=0.186

CETCH  99.0000   1.0000   1.0000   0.5066   0.2960   0.5337
       (     1) (     2) (     2) (     5) (     5) (     4)
       S=****** S=****** S=****** S=0.192  S=0.314  S=0.233

CEBUS  99.0000  99.0000  -1.0000   0.1539  -0.0168   0.8093
       (     1) (     2) (     2) (     5) (     5) (     4)
       S=****** S=****** S=****** S=0.402  S=0.489  S=0.095

CEOTH  99.0000  99.0000  99.0000   0.1539   0.0966  -0.4390
       (     1) (     2) (     2) (     5) (     5) (     4)
       S=****** S=****** S=****** S=0.402  S=0.439  S=0.280

DRIVE  99.0000  99.0000  99.0000  99.0000  99.0000  99.0000
       (     0) (     1) (     1) (     3) (     3) (     3)
       S=****** S=****** S=****** S=****** S=****** S=******


        OSP03    OSP06    OSP09    OSP12    OSP15    OSP18
CETOT   0.8660   0.2416  -0.4153  -0.0240   0.0061   0.3225
       (     3) (     3) (     3) (     5) (     5) (     4)
       S=0.167  S=0.422  S=0.364  S=0.485  S=0.496  S=0.339

CETCH   0.8660   0.2416  -0.4881  -0.2983  -0.0748   0.2656
       (     3) (     3) (     3) (     5) (     5) (     4)
       S=0.167  S=0.422  S=0.338  S=0.313  S=0.452  S=0.357

CEBUS  99.0000  99.0000   0.9986   0.9540   0.4277   0.4810
       (     3) (     3) (     3) (     5) (     5) (     4)
       S=****** S=****** S=0.017  S=0.006  S=0.236  S=0.259

CEOTH  99.0000  99.0000  99.0000   0.9540  -0.2880  -0.8779
       (     3) (     3) (     3) (     5) (     5) (     4)
       S=****** S=****** S=****** S=0.006  S=0.319  S=0.061

DRIVE  99.0000   1.0000  99.0000  99.0000  99.0000  99.0000
       (     1) (     2) (     2) (     3) (     3) (     3)
       S=****** S=****** S=****** S=****** S=****** S=******


        OCM03    OCM06    OCM09    OCM12    OCM15    OCM18
CETOT  -0.8660  -0.7196  -0.0418  -0.0418  -0.4543  -0.3838
       (     3) (     3) (     3) (     5) (     5) (     4)
       S=0.167  S=0.244  S=0.487  S=0.473  S=0.221  S=0.308

CETCH  -0.8660  -0.7196   0.0398   0.1143  -0.2707  -0.2213
       (     3) (     3) (     3) (     5) (     5) (     4)
       S=0.167  S=0.244  S=0.487  S=0.427  S=0.330  S=0.389

CEBUS  99.0000  99.0000  -0.8660  -0.5345  -0.7225  -0.9591
       (     3) (     3) (     3) (     5) (     5) (     4)
       S=****** S=****** S=0.167  S=0.177  S=0.084  S=0.020

CEOTH  99.0000  99.0000  99.0000  -0.5345  -0.0857   0.8528
       (     3) (     3) (     3) (     5) (     5) (     4)
       S=****** S=****** S=****** S=0.177  S=0.445  S=0.074

DRIVE  99.0000   1.0000  99.0000  99.0000  99.0000  99.0000
       (     1) (     2) (     2) (     3) (     3) (     3)
       S=****** S=****** S=****** S=****** S=****** S=******
```

```
 ORC03    ORC06    ORC09    ORC12    ORC15    ORC18
99.0000   1.0000   1.0000   0.4038   0.7718   0.7322
(     1) (     2) (     2) (     5) (     5) (     4)
S=****** S=****** S=****** S=0.250  S=0.063  S=0.134

99.0000   1.0000  -1.0000   0.1236   0.6687   0.5904
(     1) (     2) (     2) (     5) (     5) (     4)
S=****** S=****** S=****** S=0.422  S=0.109  S=0.205

99.0000  99.0000   1.0000   0.9095   0.3501   0.8090
(     1) (     2) (     2) (     5) (     5) (     4)
S=****** S=****** S=****** S=0.016  S=0.282  S=0.095

99.0000  99.0000  99.0000   0.9695  -0.1863  -0.5514
(     1) (     2) (     2) (     5) (     5) (     4)
S=****** S=****** S=****** S=0.016  S=0.382  S=0.224

99.0000  99.0000  99.0000  99.0000  99.0000  99.0000
(     0) (     1) (     1) (     3) (     3) (     3)
S=****** S=****** S=****** S=****** S=****** S=******


 OCR      OCR      OCR      OCR      OCR      OCR
-0.4625  -0.4625   0.2782   0.4607   0.4516   0.4228
(     5) (     5) (     5) (     5) (     5) (     5)
S=0.216  S=0.216  S=0.325  S=0.217  S=0.223  S=0.239

-0.4625  -0.4625  -0.4625  -0.4625  -0.4625  -0.4625
(     5) (     5) (     5) (     5) (     5) (     5)
S=0.216  S=0.216  S=0.216  S=0.216  S=0.216  S=0.216

99.0000  99.0000   0.5094   0.5094   0.5005   0.4710
(     5) (     5) (     5) (     5) (     5) (     5)
S=****** S=****** S=0.190  S=0.190  S=0.195  S=0.212

99.0000  99.0000  99.0000   0.5094   0.5094   0.5094
(     5) (     5) (     5) (     5) (     5) (     5)
S=****** S=****** S=****** S=0.190  S=0.190  S=0.190

-0.1854  -0.1854  -0.1854  -0.1854  -0.1854  -0.1854
(     4) (     4) (     4) (     4) (     4) (     4)
S=0.407  S=0.407  S=0.407  S=0.407  S=0.407  S=0.407


 OCT03    OCT06    OCT09    OCT12    OCT15    OCT18
-0.9820  -0.2759   0.4634  -0.2051  -0.0965  -0.0862
(     3) (     3) (     3) (     5) (     5) (     4)
S=0.061  S=0.411  S=0.347  S=0.370  S=0.439  S=0.457

-0.9820  -0.2759   0.5341  -0.0348   0.0     -0.0860
(     3) (     3) (     3) (     5) (     5) (     4)
S=0.061  S=0.411  S=0.321  S=0.478  S=0.500  S=0.457

99.0000  99.0000  -1.0000  -0.5590  -0.2480   0.2775
(     3) (     3) (     3) (     5) (     5) (     4)
S=****** S=****** S=0.001  S=0.164  S=0.344  S=0.361

99.0000  99.0000  99.0000  -0.5590  -0.7906  -0.8182
(     3) (     3) (     3) (     5) (     5) (     4)
S=****** S=****** S=****** S=0.164  S=0.056  S=0.091

99.0000   1.0000  99.0000  99.0000  99.0000  99.0000
(     1) (     2) (     2) (     3) (     3) (     3)
S=****** S=****** S=****** S=****** S=****** S=******
```

APPENDIX 8Q

CE AND DRIVE vs. OUTCOMES

Sylvania -High IFR

	ORC03	ORC06	ORC09	ORC12	ORC15	ORC18
CETOT	0.3282 (10) S=0.177	-0.1179 (18) S=0.321	-0.0666 (20) S=0.390	0.1209 (27) S=0.274	0.2677 (23) S=0.118	0.2222 (23) S=0.154
CETCH	0.3438 (10) S=0.165	-0.1127 (18) S=0.328	-0.0564 (20) S=0.407	0.1143 (27) S=0.285	0.2779 (23) S=0.100	0.1915 (23) S=0.191
CEBUS	99.0000 (10) S=******	0.0501 (18) S=0.422	0.0177 (20) S=0.470	-0.0234 (27) S=0.454	0.1244 (23) S=0.286	0.1631 (23) S=0.229
CEOTH	-0.2077 (10) S=0.282	-0.1480 (18) S=0.279	-0.1637 (20) S=0.245	0.1176 (27) S=0.280	0.0411 (23) S=0.426	-0.1226 (23) S=0.289
DRIVE	-0.2746 (8) S=0.255	0.2257 (16) S=0.200	0.0046 (17) S=0.493	-0.1652 (20) S=0.243	0.3181 (17) S=0.107	0.2894 (15) S=0.148

	OSP03	OSP06	OSP09	OSP12	OSP15	OSP18
CETOT	-0.0862 (19) S=0.363	-0.2266 (29) S=0.119	0.0365 (32) S=0.421	0.0260 (35) S=0.441	0.0232 (34) S=0.448	0.0231 (32) S=0.450
CETCH	-0.0812 (19) S=0.371	-0.2157 (29) S=0.131	-0.0304 (32) S=0.434	-0.0806 (35) S=0.323	-0.0917 (34) S=0.303	0.0396 (32) S=0.415
CEBUS	99.0000 (19) S=******	-0.1486 (29) S=0.221	0.7214 (32) S=0.001	0.5286 (35) S=0.001	0.4378 (34) S=0.005	0.0655 (32) S=0.361
CEOTH	-0.0988 (19) S=0.344	-0.1065 (29) S=0.291	-0.1010 (32) S=0.291	-0.0896 (35) S=0.304	-0.0849 (34) S=0.316	-0.1243 (32) S=0.249
DRIVE	-0.6217 (12) S=0.015	0.1385 (22) S=0.269	0.2164 (24) S=0.155	0.3440 (23) S=0.054	0.4837 (20) S=0.016	0.4127 (18) S=0.044

	OCT03	OCT06	OCT09	OCT12	OCT15	OCT18
CETOT	-0.0334 (21) S=0.409	0.1599 (30) S=0.199	0.3649 (32) S=0.020	0.1139 (35) S=0.257	-0.1347 (35) S=0.220	0.1947 (32) S=0.143
CETCH	-0.0687 (21) S=0.384	0.1130 (30) S=0.27[illegible]	0.3384 (32) S=0.029	0.0867 (35) S=0.310	-0.0619 (35) S=0.362	0.2546 (32) S=0.080
CEBUS	99.0000 (21) S=******	0.1386 (30) S=0.233	0.2927 (32) S=0.052	0.1678 (35) S=0.168	-0.2391 (35) S=0.083	-0.0369 (32) S=0.420
CEOTH	0.3300 (21) S=0.072	0.4011 (30) S=0.014	-0.0730 (32) S=0.346	-0.0896 (35) S=0.304	-0.0741 (35) S=0.336	0.0055 (32) S=0.488
DRIVE	0.0034 (14) S=0.495	0.1946 (22) S=0.193	0.0275 (24) S=0.449	-0.0520 (23) S=0.407	-0.0120 (21) S=0.479	0.1771 (18) S=0.241

	OAC03	OAC06	OAC09	OAC12	OAC15	OAC18
CETOT	0.0450 (10) S=0.451	0.2528 (18) S=0.156	0.4005 (20) S=0.040	0.3901 (27) S=0.022	0.3364 (23) S=0.058	0.6707 (23) S=0.001
CETCH	0.0657 (10) S=0.428	0.2602 (18) S=0.149	0.3847 (20) S=0.047	0.4150 (27) S=0.016	0.2504 (23) S=0.125	0.4997 (23) S=0.008
CEBUS	99.0000 (10) S=******	-0.0567 (18) S=0.412	0.2426 (20) S=0.151	-0.1142 (27) S=0.285	0.2442 (23) S=0.131	0.6309 (23) S=0.001
CEOTH	-0.2342 (10) S=0.257	-0.1816 (18) S=0.235	-0.1589 (20) S=0.252	0.1498 (27) S=0.228	0.1693 (23) S=0.220	-0.2464 (23) S=0.129
DRIVE	0.0610 (8) S=0.443	-0.0118 (16) S=0.484	0.1989 (17) S=0.222	-0.0185 (20) S=0.469	0.5118 (17) S=0.018	0.3987 (15) S=0.070

	OCM03	OCM06	OCM09	OCM12	OCM15	OCM18
CETOT	0.1569 (21) S=0.248	0.1782 (30) S=0.173	-0.3688 (32) S=0.019	0.0232 (35) S=0.447	-0.1441 (35) S=0.205	-0.2806 (32) S=0.060
CETCH	0.1495 (21) S=0.259	0.1576 (30) S=0.203	-0.3445 (32) S=0.027	0.0486 (35) S=0.391	-0.0511 (35) S=0.385	-0.2789 (32) S=0.061
CEBUS	99.0000 (21) S=******	0.2178 (30) S=0.124	-0.3404 (32) S=0.028	-0.1313 (35) S=0.226	-0.3021 (35) S=0.039	-0.2318 (32) S=0.101
CEOTH	0.1434 (21) S=0.268	0.0668 (30) S=0.363	0.1846 (32) S=0.156	0.0343 (35) S=0.422	-0.0939 (35) S=0.296	0.1413 (32) S=0.220
DRIVE	0.4084 (14) S=0.074	0.3197 (22) S=0.073	-0.1234 (24) S=0.283	-0.1305 (23) S=0.276	-0.1154 (21) S=0.309	-0.3516 (18) S=0.076

APPENDIX 8R

CE AND DRIVE vs. OUTCOMES

Sylvania - Low OCR

```
         ORC03      ORC06      ORC09      ORC12      ORC15      ORC18
CETOT   -1.0000    -0.3123     0.0351    -0.7337     0.0858    99.0000
        (    2)    (    5)    (    5)    (    4)    (    4)    (    1)
        S=*****    S=0.304    S=0.478    S=0.133    S=0.472    S=*****
CETCH   -1.0000    -0.3123     0.0413    -0.7495    -0.0123    99.0000
        (    2)    (    5)    (    5)    (    4)    (    4)    (    1)
        S=*****    S=0.304    S=0.474    S=0.125    S=0.494    S=*****
CEBUS   99.0000    99.0000    -0.0345    -0.2096     0.4302    99.0000
        (    2)    (    5)    (    5)    (    4)    (    4)    (    1)
        S=*****    S=*****    S=0.478    S=0.395    S=0.285    S=*****
CEOTH   99.0000    99.0000    99.0000    99.0000     0.2037    99.0000
        (    2)    (    5)    (    5)    (    4)    (    4)    (    1)
        S=*****    S=*****    S=*****    S=*****    S=0.398    S=*****
DRIVE    1.0000     0.5805     0.8719     0.4153    -0.6256    99.0000
        (    2)    (    4)    (    4)    (    3)    (    3)    (    1)
        S=*****    S=0.210    S=0.064    S=0.364    S=0.285    S=*****

         OSP03      OSP06      OSP09      OSP12      OSP15      OSP18      OCT03      OCT06      OCT09      OCT12      OCT15      OCT18
CETOT   -0.1213     0.5182    -0.2164     0.6027    -0.3029    99.0000    -0.5569    -0.8316    -0.5432    -0.6916    -0.1482    99.0000
        (    4)    (    4)    (    4)    (    4)    (    4)    (    1)    (    4)    (    5)    (    5)    (    5)    (    4)    (    1)
        S=0.439    S=0.241    S=0.392    S=0.199    S=0.349    S=*****    S=0.222    S=0.040    S=0.172    S=0.098    S=0.426    S=*****
CETCH   -0.1213     0.5182    -0.2171     0.6478    -0.2388    99.0000    -0.5569    -0.8316    -0.5367    -0.7934    -0.3457    99.0000
        (    4)    (    4)    (    4)    (    4)    (    4)    (    1)    (    4)    (    5)    (    5)    (    5)    (    4)    (    1)
        S=0.439    S=0.241    S=0.391    S=0.176    S=0.381    S=*****    S=0.222    S=0.040    S=0.176    S=0.055    S=0.327    S=*****
CEBUS   99.0000    99.0000    -0.2075     0.1412     0.7968    99.0000    99.0000    99.0000    -0.6124    -0.6305    -0.8000    99.0000
        (    4)    (    4)    (    4)    (    4)    (    4)    (    1)    (    4)    (    5)    (    5)    (    5)    (    4)    (    1)
        S=*****    S=*****    S=0.396    S=0.429    S=0.103    S=*****    S=*****    S=*****    S=0.136    S=0.127    S=0.100    S=*****
CEOTH   99.0000    99.0000    99.0000    -0.3026    -0.4937    99.0000    99.0000    99.0000    99.0000     0.6784     0.8165    99.0000
        (    4)    (    4)    (    4)    (    4)    (    4)    (    1)    (    4)    (    5)    (    5)    (    5)    (    4)    (    1)
        S=*****    S=*****    S=*****    S=0.349    S=0.253    S=*****    S=*****    S=*****    S=*****    S=0.104    S=0.092    S=*****
DRIVE    0.6547    -0.3273     0.3899    -0.9[illegible]9    -0.9934    99.0000    -0.8660     0.4264     0.9045     0.5606     0.5000    99.0000
        (    3)    (    3)    (    3)    (    1)    (    3)    (    1)    (    3)    (    4)    (    4)    (    4)    (    3)    (    1)
        S=0.273    S=0.394    S=0.373    S=0.136    S=0.037    S=*****    S=0.167    S=0.287    S=0.048    S=0.220    S=0.333    S=*****

         OAC03      OAC06      OAC09      OAC12      OAC15      OAC18      OCN03      OCN06      OCN09      OCN12      OCN15      OCN18
CETOT   -1.0000     0.1885     0.2797    -0.1044     0.2090    99.0000    -0.8910    -0.8000    -0.8782    -0.5169    -0.5421    99.0000
        (    2)    (    5)    (    5)    (    4)    (    4)    (    1)    (    4)    (    5)    (    5)    (    5)    (    4)    (    1)
        S=*****    S=0.381    S=0.324    S=0.448    S=0.395    S=*****    S=0.054    S=0.052    S=0.025    S=0.186    S=0.229    S=*****
CETCH   -1.0000     0.1885     0.2801    -0.1271     0.3900    99.0000    -0.8910    -0.8000    -0.8779    -0.6407    -0.6277    99.0000
        (    2)    (    5)    (    5)    (    4)    (    4)    (    1)    (    4)    (    5)    (    5)    (    5)    (    4)    (    1)
        S=*****    S=0.381    S=0.324    S=0.436    S=0.305    S=*****    S=0.054    S=0.052    S=0.025    S=0.122    S=0.186    S=*****
CEBUS   99.0000    99.0000     0.2731     0.4687     0.9229    99.0000    99.0000    99.0000    -0.8750    -0.5091    -0.8854    99.0000
        (    2)    (    5)    (    5)    (    4)    (    4)    (    1)    (    4)    (    5)    (    5)    (    5)    (    4)    (    1)
        S=*****    S=*****    S=0.328    S=0.266    S=0.039    S=*****    S=*****    S=*****    S=0.026    S=0.191    S=0.057    S=*****
CEOTH   99.0000    99.0000    99.0000    99.0000    -0.7518    99.0000    99.0000    99.0000    99.0000     0.7845     0.2582    99.0000
        (    2)    (    5)    (    5)    (    4)    (    4)    (    1)    (    4)    (    5)    (    5)    (    5)    (    4)    (    1)
        S=*****    S=*****    S=*****    S=*****    S=0.124    S=*****    S=*****    S=*****    S=*****    S=0.058    S=0.371    S=*****
DRIVE    1.0000     0.6556     0.3818     0.9484    -0.5798    99.0000    -0.5000    -0.4264    -0.0909     0.6742     0.5000    99.0000
        (    2)    (    4)    (    4)    (    3)    (    3)    (    1)    (    3)    (    4)    (    4)    (    4)    (    3)    (    1)
        S=*****    S=0.172    S=0.309    S=0.103    S=0.303    S=*****    S=0.333    S=0.287    S=0.455    S=0.163    S=0.333    S=*****
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APPENDIX 8S

CE AND DRIVE vs. OUTCOMES

Sylvania - Mid OCR

```
          ORC03      ORC06      ORC09      ORC12      ORC15      ORC18
CETOT    99.0000     1.0000    -0.4977    -0.0115     0.9707     0.9276
        (      1)  (      2)  (      3)  (      3)  (      4)  (      4)
        S=******   S=******   S=0.334    S=0.496    S=0.015    S=0.036
CETCH    99.0000     1.0000    -0.5469    -0.2722     0.8881     0.8790
        (      1)  (      2)  (      3)  (      3)  (      4)  (      4)
        S=******   S=******   S=0.316    S=0.412    S=0.056    S=0.061
CEBUS    99.0000    99.0000     0.9725     0.8587    -0.0416    -0.2866
        (      1)  (      2)  (      3)  (      3)  (      4)  (      4)
        S=******   S=******   S=0.075    S=0.171    S=0.479    S=0.357
CEOTH    99.0000    99.0000    99.0000     0.8587    -0.0399    -0.0656
        (      1)  (      2)  (      3)  (      3)  (      4)  (      4)
        S=******   S=******   S=******   S=0.171    S=0.480    S=0.467
DRIVE    99.0000    -1.0000     0.2845    -0.0146    -0.8416    -0.9612
        (      1)  (      2)  (      3)  (      3)  (      4)  (      4)
        S=******   S=******   S=0.408    S=0.495    S=0.079    S=0.019

          OSP03      OSP06      OSP09      OSP12      OSP15      OSP18      OCT03      OCT06      OCT09      OCT12      OCT15      OCT18
CETOT    99.0000    -0.5000    -0.6861    -0.5673    -0.6753    -0.5995    99.0000    -0.5000     0.2304     0.0261    -0.4570     0.1054
        (      1)  (      3)  (      3)  (      3)  (      4)  (      4)  (      1)  (      3)  (      3)  (      3)  (      4)  (      4)
        S=******   S=0.333    S=0.259    S=0.308    S=0.162    S=0.200    S=******   S=0.333    S=0.426    S=0.492    S=0.271    S=0.447
CETCH    99.0000    -0.5000    -0.7269    -0.7626    -0.5314    -0.4168    99.0000    -0.5000     0.2861     0.2861    -0.1931     0.2241
        (      1)  (      3)  (      3)  (      3)  (      4)  (      4)  (      1)  (      3)  (      3)  (      3)  (      4)  (      4)
        S=******   S=0.333    S=0.241    S=0.224    S=0.234    S=0.292    S=******   S=0.333    S=0.408    S=0.408    S=0.403    S=0.388
CEBUS    99.0000    99.0000     1.0000     0.9986    -0.2811    -0.4833    99.0000    99.0000    -0.8660    -0.8660    -0.7729    -0.8026
        (      1)  (      3)  (      3)  (      3)  (      4)  (      4)  (      1)  (      3)  (      3)  (      3)  (      4)  (      4)
        S=******   S=******   S=0.001    S=0.017    S=0.359    S=0.258    S=******   S=******   S=0.167    S=0.167    S=0.114    S=0.249
CEOTH    99.0000    99.0000    99.0000     0.9986    -0.2513    -0.5088    99.0000    99.0000    99.0000    -0.8660    -0.7746    -0.8165
        (      1)  (      3)  (      3)  (      3)  (      4)  (      4)  (      1)  (      3)  (      3)  (      3)  (      4)  (      4)
        S=******   S=******   S=******   S=0.017    S=0.374    S=0.246    S=******   S=******   S=******   S=0.167    S=0.113    S=0.092
DRIVE    99.0000     0.5000     0.5000     0.5456     0.4002     0.5088    99.0000     0.5000     0.0        0.0        0.2582     0.0
        (      1)  (      3)  (      3)  (      3)  (      4)  (      4)  (      1)  (      3)  (      3)  (      3)  (      4)  (      4)
        S=******   S=0.333    S=0.333    S=0.316    S=0.300    S=0.246    S=******   S=0.333    S=0.500    S=0.500    S=0.371    S=0.500

          OAC03      OAC06      OAC09      OAC12      OAC15      OAC18      OCM03      OCM06      OCM09      OCM12      OCM15      OCM18
CETOT    99.0000    -1.0000     0.4107     0.9503     0.8847     0.9110    99.0000     0.1890     0.6861     0.5224     0.2830     0.9768
        (      1)  (      2)  (      3)  (      3)  (      4)  (      4)  (      1)  (      3)  (      3)  (      3)  (      4)  (      4)
        S=******   S=******   S=0.365    S=0.101    S=0.058    S=0.044    S=******   S=0.439    S=0.259    S=0.325    S=0.358    S=0.012
CETCH    99.0000    -1.0000     0.3574     0.9986     0.7993     0.8324    99.0000     0.1890     0.7269     0.7269     0.4319     0.9748
        (      1)  (      2)  (      3)  (      3)  (      4)  (      4)  (      1)  (      3)  (      3)  (      3)  (      4)  (      4)
        S=******   S=******   S=0.384    S=0.017    S=0.100    S=0.084    S=******   S=0.439    S=0.241    S=0.241    S=0.284    S=0.013
CEBUS    99.0000    99.0000     0.3816    -0.7619     0.0006    -0.0999    99.0000    99.0000    -1.0000    -1.0000    -0.6308    -0.4991
        (      1)  (      2)  (      3)  (      3)  (      4)  (      4)  (      1)  (      3)  (      3)  (      3)  (      4)  (      4)
        S=******   S=******   S=0.375    S=0.224    S=0.500    S=0.450    S=******   S=******   S=0.001    S=0.001    S=0.185    S=0.250
CEOTH    99.0000    99.0000    99.0000    -0.7619    -0.0152    -0.1577    99.0000    99.0000    99.0000    -1.0000    -0.5774    -0.3333
        (      1)  (      2)  (      3)  (      3)  (      4)  (      4)  (      1)  (      3)  (      3)  (      3)  (      4)  (      4)
        S=******   S=******   S=******   S=0.224    S=0.492    S=0.421    S=******   S=******   S=******   S=0.001    S=0.211    S=0.333
DRIVE    99.0000     1.0000    -0.6097    -0.9419    -0.6875    -0.8850    99.0000    -0.1890    -0.5000    -0.5000    -0.5774    -1.0000
        (      1)  (      2)  (      3)  (      3)  (      4)  (      4)  (      1)  (      3)  (      3)  (      3)  (      4)  (      4)
        S=******   S=******   S=0.291    S=0.109    S=0.156    S=0.098    S=******   S=0.439    S=0.333    S=0.333    S=0.211    S=0.001
```

APPENDIX 8T

CE AND DRIVE vs. OUTCOMES

Sylvania - High OCR

```
        OAC03    OAC06    OAC09    OAC12    OAC15    OAC18

CETOT  -0.0866   0.0136   0.2917   0.4670   0.3819   0.4399
       (   90)  (  129)  (  145)  (  160)  (  158)  (  134)
       S=0.208  S=0.439  S=0.001  S=0.001  S=0.001  S=0.001

CETCH: -0.1393  -0.0593   0.2501   0.4536   0.3243   0.3355
       (   90)  (  129)  (  145)  (  160)  (  158)  (  134)
       S=0.095  S=0.252  S=0.001  S=0.001  S=0.001  S=0.001

CEBUS   0.1424   0.1734   0.2514   0.1887   0.2606   0.3563
       (   90)  (  129)  (  145)  (  160)  (  158)  (  134)
       S=0.090  S=0.025  S=0.001  S=0.008  S=0.001  S=0.001

CEOTH  -0.0035   0.1115   0.1173   0.1262   0.2127   0.1561
       (   90)  (  129)  (  145)  (  160)  (  158)  (  134)
       S=0.487  S=0.104  S=0.080  S=0.056  S=0.004  S=0.036

DRIVE   0.1502   0.2021   0.1919   0.0828  -0.0175   0.1314
       (   81)  (  111)  (  118)  (  131)  (  133)  (  116)
       S=0.077  S=0.017  S=0.019  S=0.174  S=0.421  S=0.090


        OCM03    OCM06    OCM09    OCM12    OCM15    OCM18

CETOT   0.1029   0.0115  -0.0755  -0.0616  -0.1017  -0.1908
       (  168)  (  207)  (  199)  (  217)  (  209)  (  173)
       S=0.092  S=0.435  S=0.145  S=0.183  S=0.071  S=0.006

CETCH   0.0621  -0.0038  -0.0363  -0.0315  -0.0422  -0.1217
       (  168)  (  207)  (  199)  (  217)  (  209)  (  173)
       S=0.212  S=0.478  S=0.305  S=0.322  S=0.272  S=0.055

CEBUS   0.0820   0.0351  -0.2253  -0.1935  -0.2053  -0.2186
       (  168)  (  207)  (  199)  (  217)  (  209)  (  173)
       S=0.145  S=0.308  S=0.001  S=0.002  S=0.001  S=0.002

CEOTH   0.1428   0.0356  -0.0501   0.1084  -0.0433  -0.0328
       (  168)  (  207)  (  199)  (  217)  (  209)  (  173)
       S=0.032  S=0.305  S=0.241  S=0.056  S=0.267  S=0.334

DRIVE  -0.0484   0.0456  -0.1345  -0.1092  -0.0672  -0.1808
       (  131)  (  162)  (  153)  (  167)  (  165)  (  140)
       S=0.291  S=0.278  S=0.049  S=0.080  S=0.196  S=0.016


        OSP03    OSP06    OSP09    OSP12    OSP15    OSP18

CETOT  -0.1412  -0.1805  -0.0669  -0.0126  -0.0676  -0.0103
       (  160)  (  190)  (  188)  (  206)  (  201)  (  169)
       S=0.037  S=0.006  S=0.181  S=0.429  S=0.170  S=0.447

CETCH  -0.1230  -0.1780  -0.0677  -0.0301  -0.0667  -0.0624
       (  160)  (  190)  (  188)  (  206)  (  201)  (  169)
       S=0.061  S=0.007  S=0.178  S=0.334  S=0.173  S=0.210

CEBUS  -0.0550  -0.0097   0.0329   0.0643  -0.0112   0.1111
       (  160)  (  190)  (  188)  (  206)  (  201)  (  169)
       S=0.245  S=0.447  S=0.327  S=0.114  S=0.438  S=0.075

CEOTH  -0.0434  -0.0221  -0.0348  -0.0407  -0.0355   0.0127
       (  160)  (  190)  (  188)  (  206)  (  201)  (  169)
       S=0.293  S=0.381  S=0.318  S=0.281  S=0.309  S=0.435

DRIVE   0.1306   0.0363   0.1119   0.1709   0.1093   0.1642
       (  127)  (  151)  (  145)  (  161)  (  157)  (  136)
       S=0.072  S=0.329  S=0.089  S=0.015  S=0.086  S=0.028
```

```
 ORC03    ORC06    ORC09    ORC12    ORC15    ORC18

 0.1405   0.2010   0.2491   0.2855  -0.0070   0.0078
(   90)  (  129)  (  145)  (  160)  (  158)  (  134)
S=0.093  S=0.011  S=0.001  S=0.001  S=0.465  S=0.464

 0.1436   0.1941   0.2549   0.2877  -0.0045   0.0124
(   90)  (  129)  (  145)  (  160)  (  158)  (  134)
S=0.088  S=0.014  S=0.001  S=0.001  S=0.478  S=0.443

-0.0017   0.0536   0.0349   0.0734  -0.0102  -0.0036
(   90)  (  129)  (  145)  (  160)  (  158)  (  134)
S=0.494  S=0.273  S=0.339  S=0.178  S=0.449  S=0.484

 0.0101  -0.0040   0.0074   0.0524  -0.0030  -0.0155
(   90)  (  129)  (  145)  (  160)  (  158)  (  134)
S=0.462  S=0.482  S=0.465  S=0.255  S=0.485  S=0.429

 0.0504   0.1170   0.1654  -0.0075   0.0189   0.0207
(   81)  (  111)  (  118)  (  131)  (  133)  (  116)
S=0.324  S=0.111  S=0.037  S=0.466  S=0.414  S=0.413


 OCR      OCR      OCR      OCR      OCR      OCR

 0.0565   0.1070   0.0876   0.1046   0.1056   0.1099
(  220)  (  220)  (  220)  (  220)  (  220)  (  220)
S=0.202  S=0.057  S=0.098  S=0.061  S=0.059  S=0.052

 0.0386   0.0973   0.0670   0.0731   0.0861   0.0742
(  220)  (  220)  (  220)  (  220)  (  220)  (  220)
S=0.285  S=0.075  S=0.161  S=0.140  S=0.102  S=0.137

 0.0507   0.0738   0.1052   0.1292   0.1001   0.1415
(  220)  (  220)  (  220)  (  220)  (  220)  (  220)
S=0.227  S=0.138  S=0.060  S=0.028  S=0.069  S=0.018

 0.0146  -0.0121  -0.0164  -0.0077   0.0191   0.0125
(  220)  (  220)  (  220)  (  220)  (  220)  (  220)
S=0.415  S=0.429  S=0.404  S=0.455  S=0.389  S=0.427

 0.3392   0.3392   0.3392   0.3392   0.3392   0.3392
(  179)  (  179)  (  179)  (  179)  (  179)  (  179)
S=0.001  S=0.001  S=0.001  S=0.001  S=0.001  S=0.001


 OCT03    OCT06    OCT09    OCT12    OCT15    OCT18

-0.1070  -0.1034  -0.0361  -0.0657  -0.0306   0.0558
(  170)  (  209)  (  200)  (  218)  (  210)  (  173)
S=0.082  S=0.068  S=0.306  S=0.167  S=0.329  S=0.233

-0.1277  -0.1445  -0.0529  -0.0752  -0.0185   0.0588
(  170)  (  209)  (  200)  (  218)  (  210)  (  173)
S=0.049  S=0.018  S=0.228  S=0.135  S=0.395  S=0.221

 0.0144   0.0629   0.0406  -0.0431  -0.0413  -0.0052
(  170)  (  209)  (  200)  (  218)  (  210)  (  173)
S=0.426  S=0.183  S=0.284  S=0.263  S=0.276  S=0.473

 0.0987   0.1127   0.0421   0.1453  -0.0171   0.0373
(  170)  (  209)  (  200)  (  218)  (  210)  (  173)
S=0.100  S=0.052  S=0.277  S=0.016  S=0.403  S=0.313

-0.0466   0.0405  -0.0195  -0.0620  -0.1069  -0.0241
(  133)  (  164)  (  154)  (  168)  (  166)  (  140)
S=0.321  S=0.303  S=0.405  S=0.212  S=0.085  S=0.389
```

CE AND DRIVE vs. OUTCOMES

Total Group

APPENDIX 9B

	OAC03	OAC06	OAC09	OAC12	OAC15	OAC18
CETOT	-0.1328 (41) S=0.204	-0.0563 (66) S=0.327	0.2926 (69) S=0.007	0.5329 (76) S=0.001	0.3669 (73) S=0.001	0.4897 (59) S=0.001
CETCH	-0.2004 (41) S=0.105	-0.0932 (66) S=0.228	0.2792 (69) S=0.010	0.5289 (76) S=0.001	0.3202 (73) S=0.003	0.3622 (59) S=0.002
CEBUS	0.1178 (41) S=0.232	0.0667 (66) S=0.297	0.2840 (69) S=0.009	0.1680 (76) S=0.073	0.2415 (73) S=0.020	0.4312 (59) S=0.001
CEOTH	0.3771 (41) S=0.008	0.4216 (66) S=0.001	-0.0771 (69) S=0.265	0.0774 (76) S=0.253	0.1585 (73) S=0.090	0.2220 (59) S=0.046
DRIVE	-0.0231 (37) S=0.446	0.1959 (58) S=0.070	0.3007 (59) S=0.010	0.0285 (65) S=0.411	-0.1651 (65) S=0.094	0.0211 (53) S=0.440

	OSP03	OSP06	OSP09	OSP12	USP15	OSP18
CETOT	-0.1547 (77) S=0.090	-0.1922 (98) S=0.029	-0.1513 (90) S=0.077	-0.0579 (95) S=0.289	-0.1082 (90) S=0.155	-0.0240 (72) S=0.421
CETCH	-0.1423 (77) S=0.108	-0.1898 (98) S=0.031	-0.1758 (90) S=0.045	-0.0658 (95) S=0.263	-0.1011 (90) S=0.172	-0.0689 (72) S=0.283
CEBUS	-0.0500 (77) S=0.333	-0.0124 (98) S=0.452	0.3051 (90) S=0.002	0.0393 (95) S=0.353	-0.0363 (90) S=0.367	0.0657 (72) S=0.280
CEOTH	-0.0319 (77) S=0.392	0.0052 (98) S=0.480	-0.0421 (90) S=0.347	-0.0587 (95) S=0.286	-0.0435 (90) S=0.342	0.0572 (72) S=0.317
DRIVE	0.1499 (61) S=0.125	0.0851 (79) S=0.225	0.1922 (72) S=0.053	0.1902 (79) S=0.047	0.1531 (75) S=0.095	0.1777 (62) S=0.083

	OCM03	OCM06	OCM09	OCM12	OCM15	OCM18
CETOT	0.0494 (77) S=0.335	-0.0798 (102) S=0.213	-0.0530 (93) S=0.307	-0.0332 (99) S=0.372	-0.0217 (91) S=0.419	-0.1739 (72) S=0.072
CETCH	0.0243 (77) S=0.417	-0.1089 (102) S=0.138	-0.0127 (93) S=0.452	-0.0374 (99) S=0.357	0.0163 (91) S=0.439	-0.0776 (72) S=0.258
CEBUS	0.0904 (77) S=0.217	0.0859 (102) S=0.195	-0.3549 (93) S=0.001	-0.0952 (99) S=0.174	-0.1379 (91) S=0.096	-0.2281 (72) S=0.027
CEOTH	0.1239 (77) S=0.141	0.1068 (102) S=0.143	-0.0530 (93) S=0.307	0.2362 (99) S=0.009	-0.0014 (91) S=0.495	-0.1278 (72) S=0.142
DRIVE	-0.0448 (59) S=0.368	0.0603 (80) S=0.297	0.0204 (73) S=0.432	-0.0446 (80) S=0.347	0.0050 (76) S=0.483	-0.1219 (62) S=0.173

	ORC03	ORC06	ORC09	ORC12	ORC15	ORC18
CETOT	0.1611 (41) S=0.157	0.1421 (66) S=0.127	0.2556 (69) S=0.017	0.2830 (76) S=0.007	-0.0784 (73) S=0.255	-0.0250 (59) S=0.426
CETCH	0.1644 (41) S=0.152	0.1481 (66) S=0.118	0.2726 (69) S=0.012	0.3035 (76) S=0.004	-0.0672 (73) S=0.286	-0.0054 (59) S=0.484
CEBUS	0.0039 (41) S=0.490	-0.0114 (66) S=0.464	0.0137 (69) S=0.456	-0.0337 (76) S=0.386	-0.0455 (73) S=0.351	-0.0501 (59) S=0.353
CEOTH	-0.0511 (41) S=0.376	-0.0769 (66) S=0.270	-0.1071 (69) S=0.191	0.0004 (76) S=0.499	-0.0472 (73) S=0.346	-0.0334 (59) S=0.401
DRIVE	0.1431 (37) S=0.199	0.0779 (58) S=0.281	0.1295 (59) S=0.164	-0.1456 (65) S=0.124	-0.0047 (65) S=0.485	-0.0228 (53) S=0.436

	CCR	OCR	OCR	OCR	OCR	OCR
CETOT	-0.0398 (55) S=0.386	0.0668 (55) S=0.314	0.0261 (55) S=0.425	0.0736 (55) S=0.297	0.0414 (55) S=0.382	0.0476 (55) S=0.365
CETCH	-0.0665 (55) S=0.315	0.0842 (55) S=0.270	0.0407 (55) S=0.384	0.0736 (55) S=0.297	0.0846 (55) S=0.269	0.0647 (55) S=0.319
CEBUS	0.1022 (55) S=0.229	0.0714 (55) S=0.302	0.0961 (55) S=0.243	0.1194 (55) S=0.193	0.0228 (55) S=0.434	0.0824 (55) S=0.275
CEOTH	-0.1972 (55) S=0.074	-0.3375 (55) S=0.006	-0.3421 (55) S=0.005	-0.2678 (55) S=0.024	-0.2291 (55) S=0.046	-0.2618 (55) S=0.027
DRIVE	0.1677 (50) S=0.122	0.1677 (50) S=0.122	0.1677 (50) S=0.122	0.1677 (50) S=0.122	0.1677 (50) S=0.122	0.1677 (50) S=0.122

	OCT03	OCT06	OCT09	OCT12	OCT15	JCT18
CETOT	-0.1290 (78) S=0.130	-0.0844 (103) S=0.198	0.0914 (94) S=0.190	0.0082 (100) S=0.468	0.0076 (92) S=0.472	0.0965 (72) S=0.210
CETCH	-0.1643 (78) S=0.075	-0.1097 (103) S=0.135	0.0769 (94) S=0.231	-0.0222 (100) S=0.413	-0.0224 (92) S=0.416	0.1134 (72) S=0.172
CEBUS	0.1589 (78) S=0.082	0.0790 (103) S=0.214	0.0772 (94) S=0.230	-0.0196 (100) S=0.423	0.0653 (92) S=0.268	-0.0366 (72) S=0.380
CEOTH	-0.0003 (78) S=0.499	0.0814 (103) S=0.207	0.0729 (94) S=0.243	0.3676 (100) S=0.001	0.0799 (92) S=0.225	0.0653 (72) S=0.293
DRIVE	-0.0949 (50) S=0.259	-0.0995 (81) S=0.188	-0.0952 (74) S=0.208	-0.0412 (81) S=0.358	-0.0737 (77) S=0.262	-0.0118 (62) S=0.464

CE AND DRIVE vs. OUTCOMES

Total Group - Masters

APPENDIX 9C

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         OAC03     OAC06     OAC09     OAC12     OAC15     OAC18

CETOT   0.0366    0.0911    0.2584    0.2655    0.3415    0.3638
        (   49)   (   63)   (   76)   (   84)   (   85)   (   75)
        S=0.402   S=0.239   S=0.012   S=0.007   S=0.001   S=0.001

CETCH   0.0196   -0.0783    0.1546    0.2188    0.2565    0.2754
        (   49)   (   63)   (   76)   (   84)   (   85)   (   75)
        S=0.447   S=0.271   S=0.091   S=0.023   S=0.009   S=0.008

CEBUS   0.2251    0.3198    0.2056    0.1940    0.3042    0.3272
        (   49)   (   63)   (   76)   (   84)   (   85)   (   75)
        S=0.060   S=0.005   S=0.037   S=0.038   S=0.002   S=0.002

CEOTH  -0.1044    0.0970    0.2322    0.1923    0.2583   -0.0362
        (   49)   (   63)   (   76)   (   84)   (   85)   (   75)
        S=0.238   S=0.225   S=0.022   S=0.040   S=0.008   S=0.379

DRIVE   0.3422    0.2074    0.0815    0.1171    0.0686    0.1752
        (   44)   (   53)   (   59)   (   66)   (   68)   (   63)
        S=0.011   S=0.058   S=0.270   S=0.175   S=0.289   S=0.085


         OSP03     OSP06     OSP09     OSP12     OSP15     OSP18

CETOT  -0.1979   -0.1714   -0.0126    0.0643    0.0199    0.0055
        (   83)   (   92)   (   98)   (  111)   (  111)   (   97)
        S=0.036   S=0.051   S=0.451   S=0.251   S=0.418   S=0.478

CETCH  -0.1582   -0.1761    0.0117    0.0302    0.0114   -0.0552
        (   83)   (   92)   (   98)   (  111)   (  111)   (   97)
        S=0.077   S=0.047   S=0.454   S=0.377   S=0.453   S=0.296

CEBUS  -0.0846   -0.0047   -0.0372    0.1330    0.0540    0.1458
        (   83)   (   92)   (   98)   (  111)   (  111)   (   97)
        S=0.224   S=0.482   S=0.358   S=0.082   S=0.287   S=0.077

CEOTH  -0.0788   -0.0443   -0.0392   -0.0317   -0.0331   -0.0081
        (   83)   (   92)   (   98)   (  111)   (  111)   (   97)
        S=0.239   S=0.337   S=0.351   S=0.371   S=0.365   S=0.469

DRIVE   0.1083   -0.0655    0.1008    0.1758    0.1103    0.1552
        (   66)   (   72)   (   74)   (   82)   (   82)   (   74)
        S=0.194   S=0.290   S=0.196   S=0.057   S=0.162   S=0.093


         OCM03     OCM06     OCM09     OCM12     OCM15     OCM18

CETOT   0.1832    0.0726   -0.1259   -0.1826   -0.1770   -0.1908
        (   91)   (  105)   (  106)   (  118)   (  118)   (  101)
        S=0.041   S=0.231   S=0.099   S=0.024   S=0.028   S=0.028

CETCH   0.1086    0.0814   -0.0902   -0.0943   -0.0906   -0.1435
        (   91)   (  105)   (  106)   (  118)   (  118)   (  101)
        S=0.153   S=0.204   S=0.179   S=0.155   S=0.165   S=0.076

CEBUS   0.0725   -0.0270   -0.1482   -0.3035   -0.2747   -0.2144
        (   91)   (  105)   (  106)   (  118)   (  118)   (  101)
        S=0.247   S=0.392   S=0.065   S=0.001   S=0.001   S=0.016

CEOTH   0.1832    0.0269   -0.0504   -0.0286   -0.0728    0.0439
        (   91)   (  105)   (  106)   (  118)   (  118)   (  101)
        S=0.041   S=0.392   S=0.304   S=0.379   S=0.217   S=0.332

DRIVE  -0.0518    0.0291   -0.2439   -0.1666   -0.1158   -0.2019
        (   72)   (   82)   (   83)   (   87)   (   89)   (   78)
        S=0.333   S=0.398   S=0.015   S=0.061   S=0.140   S=0.038
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```
  ORC03     ORC06     ORC09     ORC12     ORC15     ORC18

 0.0377    0.1156    0.0913    0.2016    0.2594    0.0544
 (   49)   (   63)   (   76)   (   84)   (   85)   (   75)
 S=0.398   S=0.184   S=0.217   S=0.033   S=0.008   S=0.321

 0.0200    0.0229    0.0632    0.1745    0.2405    0.0188
 (   49)   (   63)   (   76)   (   84)   (   85)   (   75)
 S=0.446   S=0.429   S=0.294   S=0.056   S=0.013   S=0.436

-0.0317    0.1667    0.0315    0.1458    0.1590    0.1051
 (   49)   (   63)   (   76)   (   84)   (   85)   (   75)
 S=0.414   S=0.096   S=0.393   S=0.093   S=0.073   S=0.185

 0.0578    0.0911    0.0789    0.1060    0.1692    0.0049
 (   49)   (   63)   (   76)   (   84)   (   85)   (   75)
 S=0.347   S=0.239   S=0.249   S=0.169   S=0.061   S=0.483

-0.0745    0.1781    0.1530    0.1002    0.1051    0.0995
 (   44)   (   53)   (   59)   (   66)   (   68)   (   63)
 S=0.315   S=0.101   S=0.124   S=0.212   S=0.197   S=0.219


  OCR       OCR       OCR       OCR       OCR       OCR

 0.0923    0.1131    0.0976    0.1000    0.1144    0.1158
 (  165)   (  165)   (  165)   (  165)   (  165)   (  165)
 S=0.119   S=0.074   S=0.106   S=0.101   S=0.072   S=0.069

 0.0812    0.0895    0.0616    0.0532    0.0647    0.0542
 (  165)   (  165)   (  165)   (  165)   (  165)   (  165)
 S=0.150   S=0.126   S=0.216   S=0.249   S=0.204   S=0.245

 0.0232    0.0765    0.1125    0.1394    0.1456    0.1756
 (  165)   (  165)   (  165)   (  165)   (  165)   (  165)
 S=0.383   S=0.164   S=0.075   S=0.037   S=0.031   S=0.012

 0.0440    0.0393    0.0463    0.0551    0.0750    0.0739
 (  165)   (  165)   (  165)   (  165)   (  165)   (  165)
 S=0.287   S=0.308   S=0.277   S=0.241   S=0.169   S=0.173

 0.3870    0.3870    0.3870    0.3870    0.3870    0.3870
 (  129)   (  129)   (  129)   (  129)   (  129)   (  129)
 S=0.001   S=0.001   S=0.001   S=0.001   S=0.001   S=0.001


  OCT03     OCT06     OCT09     OCT12     OCT15     OCT18

 0.0155   -0.0022   -0.1282   -0.0340    0.0302    0.0458
 (   92)   (  106)   (  106)   (  118)   (  118)   (  101)
 S=0.442   S=0.491   S=0.095   S=0.357   S=0.373   S=0.325

 0.0283   -0.0667   -0.1656   -0.0038    0.1202    0.0345
 (   92)   (  106)   (  106)   (  118)   (  118)   (  101)
 S=0.395   S=0.248   S=0.045   S=0.484   S=0.097   S=0.366

-0.1807    0.0468    0.0137   -0.0553   -0.1400    0.0297
 (   92)   (  106)   (  106)   (  118)   (  118)   (  101)
 S=0.042   S=0.317   S=0.445   S=0.276   S=0.065   S=0.384

 0.1196    0.1147    0.0216   -0.0965   -0.0874    0.0265
 (   92)   (  106)   (  106)   (  118)   (  118)   (  101)
 S=0.128   S=0.121   S=0.413   S=0.149   S=0.173   S=0.396

 0.0013    0.1742    0.0576   -0.0747   -0.1250   -0.0125
 (   73)   (   83)   (   80)   (   87)   (   89)   (   78)
 S=0.497   S=0.058   S=0.306   S=0.246   S=0.122   S=0.456
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CE AND DRIVE vs. OUTCOMES

Total Group - No Masters

	JAC03	JAC06	OAC09	OAC12	OAC15	OAC18	ORC03	ORC06	ORC09	ORC12	CRC15	ORC18
CETOT	0.2671 (9) S=0.244	-0.3776 (17) S=0.068	0.0957 (13) S=0.378	0.0276 (14) S=0.463	-0.1191 (11) S=0.364	0.6069 (9) S=0.042	0.1852 (9) S=0.317	0.5333 (17) S=0.014	0.6087 (13) S=0.014	0.4326 (14) S=0.061	-0.0824 (11) S=0.405	0.5462 (9) S=0.064
CETCH	0.0197 (9) S=0.480	-0.4003 (17) S=0.056	0.0950 (13) S=0.379	0.0096 (14) S=0.487	-0.1308 (11) S=0.351	0.6007 (9) S=0.044	0.2832 (9) S=0.230	0.5638 (17) S=0.009	0.6313 (13) S=0.010	0.4480 (14) S=0.054	-0.0658 (11) S=0.419	0.5117 (9) S=0.080
CEBUS	0.5724 (9) S=0.054	-0.1387 (17) S=0.298	-0.1059 (13) S=0.365	-0.0682 (14) S=0.408	0.0960 (11) S=0.389	0.4226 (9) S=0.129	-0.1770 (9) S=0.324	-0.2741 (17) S=0.144	-0.4073 (13) S=0.084	-0.4306 (14) S=0.062	-0.3198 (11) S=0.169	0.4954 (9) S=0.088
CEOTH	0.4212 (9) S=0.129	0.5334 (17) S=0.014	0.2718 (13) S=0.185	0.3798 (14) S=0.090	-0.0063 (11) S=0.493	0.4054 (9) S=0.140	0.1869 (9) S=0.315	-0.2193 (17) S=0.199	0.2042 (13) S=0.252	0.2804 (14) S=0.166	0.3883 (11) S=0.119	0.7737 (9) S=0.007
DRIVE	-0.2528 (6) S=0.314	0.1960 (13) S=0.251	0.5420 (11) S=0.043	0.4161 (11) S=0.102	0.1557 (10) S=0.334	-0.1624 (8) S=0.350	0.3059 (5) S=0.308	0.3059 (5) S=0.308	0.3059 (5) S=0.308	0.3059 (5) S=0.308	0.3059 (5) S=0.308	0.3059 (5) S=0.308

	OSP03	OSP06	OSP09	OSP12	OSP15	OSP18	OCR	OCR	OCR	OCR	CCR	OCR
CETOT	-0.1753 (17) S=0.251	-0.1473 (22) S=0.257	-0.1313 (17) S=0.308	0.0404 (17) S=0.439	-0.0859 (15) S=0.380	0.4219 (11) S=0.098	-0.3555 (6) S=0.245	0.5917 (6) S=0.108	0.5905 (6) S=0.109	0.5881 (6) S=0.110	0.4115 (6) S=0.209	0.2248 (6) S=0.334
CETCH	-0.1668 (17) S=0.261	-0.2091 (22) S=0.175	-0.1436 (17) S=0.291	0.0170 (17) S=0.474	-0.0891 (15) S=0.376	0.3766 (11) S=0.127	-0.3555 (6) S=0.245	0.5917 (6) S=0.108	0.5905 (6) S=0.109	0.5881 (6) S=0.110	0.4325 (6) S=0.196	0.3390 (6) S=0.256
CEBUS	-0.0678 (17) S=0.398	0.6872 (22) S=0.001	0.2021 (17) S=0.218	0.5765 (17) S=0.008	0.0984 (15) S=0.364	0.5986 (11) S=0.026	99.0000 (6) S=*****	99.0000 (6) S=*****	99.0000 (6) S=*****	99.0000 (6) S=*****	-0.3555 (6) S=0.245	-0.7566 (6) S=0.041
CEOTH	-0.0964 (17) S=0.356	-0.0075 (22) S=0.487	0.0022 (17) S=0.497	-0.1782 (17) S=0.247	-0.2273 (15) S=0.208	0.4671 (11) S=0.074	99.0000 (6) S=*****	99.0000 (6) S=*****	99.0000 (6) S=*****	99.0000 (6) S=*****	99.0000 (6) S=*****	-0.5874 (6) S=0.110
DRIVE	0.0795 (12) S=0.403	0.2462 (17) S=0.170	0.3046 (13) S=0.156	0.4504 (14) S=0.053	0.1734 (13) S=0.286	0.1683 (10) S=0.321	0.3394 ([illegible]) S=[illegible]	-0.0598 (13) S=0.423	0.1741 (11) S=[illegible]	-0.0245 (11) S=0.472	0.1696 (10) S=0.320	-0.1735 (8) S=0.341

	OCM03	OCM06	UCM09	OCM12	OCM15	OCM18	JCT03	OCT06	JCT09	OCT12	OCT15	UCT18
CETOT	0.0746 (15) S=0.396	-0.1443 (20) S=0.272	-0.3371 (14) S=0.119	-0.4737 (16) S=0.032	-0.0706 (14) S=0.405	-0.1708 (11) S=0.308	-0.3119 (16) S=0.120	-0.2729 (21) S=0.116	-0.1418 (15) S=0.307	-0.1527 (17) S=0.279	-0.1562 (15) S=0.289	-0.4473 (11) S=0.084
CETCH	0.0637 (15) S=0.411	-0.1725 (20) S=0.233	-0.2981 (14) S=0.150	-0.4753 (16) S=0.031	-0.0583 (14) S=0.421	-0.1641 (11) S=0.315	-0.3216 (16) S=0.112	-0.2842 (21) S=0.106	-0.1587 (15) S=0.286	-0.2097 (17) S=0.210	-0.1639 (15) S=0.280	-0.4462 (11) S=0.084
CEBUS	0.1084 (15) S=0.350	0.0689 (20) S=0.386	-0.3173 (14) S=0.134	-0.1887 (16) S=0.242	-0.3417 (14) S=0.116	-0.1734 (11) S=0.305	0.1817 (16) S=0.250	0.1629 (21) S=0.240	0.1619 (15) S=0.282	0.3388 (17) S=0.092	0.1672 (15) S=0.276	-0.3212 (11) S=0.168
CEOTH	0.0453 (15) S=0.436	0.2835 (20) S=0.113	-0.5934 (14) S=0.013	0.2162 (16) S=0.211	0.3889 (14) S=0.085	-0.1150 (11) S=0.368	-0.3435 (16) S=0.096	0.0081 (21) S=0.486	0.1760 (15) S=0.265	0.7335 (17) S=0.001	-0.2548 (15) S=0.180	-0.3448 (11) S=0.149
DRIVE	-0.2591 (10) S=0.235	-0.3056 (14) S=0.143	-0.2958 (10) S=0.211	-0.3083 (12) S=0.165	-0.0168 (12) S=0.479	0.0019 (10) S=0.498	-0.0841 (11) S=0.403	0.1068 (15) S=0.352	0.1572 (11) S=0.322	0.4198 (13) S=0.077	0.2055 (13) S=0.250	0.7339 (10) S=0.008

CE AND DRIVE vs. OUTCOMES

Total Group - Doctorate

APPENDIX 9D

APPENDIX 9E

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        OAC03     OAC06     OAC09     OAC12     OAC15     OAC18           ORC03     ORC06     ORC09     ORC12     ORC15     ORC18

CETOT  -0.1271    0.0392    0.2834    0.4913    0.3396    0.3669           0.1164    0.2481    0.1586    0.2618    0.1914   -0.0422
       (   75)  (   97)  (   97)  (  102)  (   99)  (   81)           (   75)  (   97)  (   97)  (  102)  (   99)  (   81)
       S=0.139   S=0.352   S=0.002   S=0.001   S=0.001   S=0.001          S=0.160   S=0.007   S=0.060   S=0.004   S=0.029   S=0.354

CETCH  -0.1799   -0.0463    0.2304    0.4854    0.2773    0.2375           0.1129    0.2226    0.1410    0.2486    0.1782   -0.0694
       (   75)  (   97)  (   97)  (  102)  (   99)  (   81)           (   75)  (   97)  (   97)  (  102)  (   99)  (   81)
       S=0.061   S=0.326   S=0.012   S=0.001   S=0.003   S=0.016          S=0.167   S=0.014   S=0.084   S=0.006   S=0.039   S=0.269

CEBUS   0.1388    0.1754    0.3881    0.2422    0.2376    0.3892           0.0072    0.1037    0.2520    0.1882    0.1253    0.0798
       (   75)  (   97)  (   97)  (  102)  (   99)  (   81)           (   75)  (   97)  (   97)  (  102)  (   99)  (   81)
       S=0.118   S=0.043   S=0.001   S=0.007   S=0.009   S=0.001          S=0.475   S=0.156   S=0.006   S=0.029   S=0.108   S=0.239

CEOTH  -0.0043    0.1127    0.1177    0.0875    0.2507    0.1587           0.0176    0.0218    0.0123    0.0395    0.0739   -0.0012
       (   75)  (   97)  (   97)  (  102)  (   99)  (   81)           (   75)  (   97)  (   97)  (  102)  (   99)  (   81)
       S=0.485   S=0.136   S=0.125   S=0.191   S=0.006   S=0.079          S=0.440   S=0.416   S=0.452   S=0.347   S=0.234   S=0.496

DRIVE   0.1221    0.1594    0.1582    0.0092   -0.1404    0.0007           0.0714    0.1007    0.1249   -0.0108   -0.0303    0.0097
       (   57)  (   85)  (   84)  (   86)  (   84)  (   68)           (   57)  (   85)  (   84)  (   86)  (   84)  (   68)
       S=0.163   S=0.073   S=0.075   S=0.467   S=0.101   S=0.498          S=0.283   S=0.180   S=0.129   S=0.461   S=0.392   S=0.469

        OSP03     OSP06     OSP09     OSP12     OSP15     OSP18           OCR       OCR       OCR       OCR       OCR       OCR

CETOT  -0.1336   -0.1826   -0.0504   -0.0113   -0.0839    0.0005           0.0150    0.0956    0.0616    0.0606    0.0494    0.0593
       (  126)  (  137)  (  137)  (  138)  (  123)  (  101)           (  112)  (  112)  (  112)  (  112)  (  112)  (  112)
       S=0.068   S=0.016   S=0.279   S=0.448   S=0.178   S=0.498          S=0.438   S=0.158   S=0.259   S=0.263   S=0.303   S=0.267

CETCH  -0.1170   -0.1785   -0.0523   -0.0167   -0.0735   -0.0416           0.0043    0.0916    0.0416    0.0308    0.0378    0.0299
       (  126)  (  137)  (  137)  (  138)  (  123)  (  101)           (  112)  (  112)  (  112)  (  112)  (  112)  (  112)
       S=0.096   S=0.018   S=0.272   S=0.423   S=0.209   S=0.340          S=0.482   S=0.168   S=0.332   S=0.373   S=0.346   S=0.377

CEBUS  -0.0482   -0.0243    0.0458    0.0259   -0.0488    0.0769           0.0214    0.0619    0.0996    0.1185    0.0573    0.1024
       (  126)  (  137)  (  137)  (  138)  (  123)  (  101)           (  112)  (  112)  (  112)  (  112)  (  112)  (  112)
       S=0.296   S=0.389   S=0.298   S=0.382   S=0.296   S=0.222          S=0.411   S=0.258   S=0.148   S=0.107   S=0.274   S=0.141

CEOTH  -0.0427   -0.0194   -0.0353   -0.0268   -0.0368    0.0261           0.0134   -0.0254   -0.0339   -0.0380   -0.0040   -0.0084
       (  126)  (  137)  (  137)  (  138)  (  123)  (  101)           (  112)  (  112)  (  112)  (  112)  (  112)  (  112)
       S=0.318   S=0.411   S=0.341   S=0.377   S=0.343   S=0.398          S=0.444   S=0.395   S=0.361   S=0.345   S=0.483   S=0.465

DRIVE   0.1335    0.0673    0.1255    0.1620    0.0580    0.1321           0.2850    0.2850    0.2850    0.2850    0.2850    0.2850
       (  101)  (  111)  (  109)  (  110)  (   95)  (   79)           (  100)  (  100)  (  100)  (  100)  (  100)  (  100)
       S=0.092   S=0.241   S=0.097   S=0.045   S=0.287   S=0.123          S=0.002   S=0.002   S=0.002   S=0.002   S=0.002   S=0.002

        OCM03     OCM06     OCM09     OCM12     OCM15     OCM18           OCT03     OCT06     OCT09     OCT12     OCT15     OCT18

CETOT   0.1353    0.0266    0.0045   -0.0111   -0.0318   -0.1665          -0.0105   -0.0674   -0.1060   -0.1097   -0.0600    0.0192
       (  134)  (  152)  (  146)  (  147)  (  130)  (  105)           (  135)  (  153)  (  146)  (  147)  (  130)  (  105)
       S=0.060   S=0.373   S=0.479   S=0.447   S=0.360   S=0.045          S=0.452   S=0.204   S=0.101   S=0.093   S=0.249   S=0.423

CETCH   0.0931    0.0115    0.0567    0.0123   -0.0024   -0.1068          -0.0357   -0.1238   -0.1408   -0.1338   -0.0685   -0.0118
       (  134)  (  152)  (  146)  (  147)  (  130)  (  105)           (  135)  (  153)  (  146)  (  147)  (  130)  (  105)
       S=0.142   S=0.444   S=0.248   S=0.441   S=0.489   S=0.139          S=0.341   S=0.064   S=0.045   S=0.053   S=0.219   S=0.452

CEBUS   0.0748    0.0392   -0.2423   -0.1614   -0.0595   -0.1745           0.0311    0.0993    0.0567   -0.0259    0.0174    0.0346
       (  134)  (  152)  (  146)  (  147)  (  130)  (  105)           (  135)  (  153)  (  146)  (  147)  (  130)  (  105)
       S=0.195   S=0.316   S=0.002   S=0.025   S=0.251   S=0.038          S=0.360   S=0.111   S=0.248   S=0.378   S=0.422   S=0.363

CEOTH   0.1529    0.0247   -0.0565    0.1371   -0.0689   -0.0402           0.0995    0.1133    0.0685    0.1934   -0.0337    0.0668
       (  134)  (  152)  (  146)  (  147)  (  130)  (  105)           (  135)  (  153)  (  146)  (  147)  (  130)  (  105)
       S=0.039   S=0.381   S=0.249   S=0.049   S=0.218   S=0.342          S=0.125   S=0.082   S=0.206   S=0.009   S=0.352   S=0.249

DRIVE  -0.0453    0.0276   -0.1338   -0.0915   -0.1204   -0.2045          -0.0188    0.1608    0.0821   -0.0753   -0.1572   -0.1158
       (  107)  (  122)  (  116)  (  116)  (  103)  (   83)           (  108)  (  123)  (  116)  (  116)  (  103)  (   83)
       S=0.322   S=0.382   S=0.076   S=0.164   S=0.113   S=0.032          S=0.423   S=0.038   S=0.191   S=0.211   S=0.056   S=0.149
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CE AND DRIVE vs. OUTCOMES

Total Group - Low Schools

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       OAC03   OAC06   OAC09   OAC12   OAC15   OAC18           ORC03   ORC06   ORC09   ORC12   ORC15   ORC18

CETOT   0.0811 -0.1464  0.3962  0.4341  0.4739  0.5626          0.4746  0.0517  0.4285  0.4119 -0.0847  0.0201
       (   13) (   28) (   39) (   46) (   53) (   45)         (   13) (   28) (   39) (   46) (   53) (   45)
       S=0.396 S=0.229 S=0.006 S=0.001 S=0.001 S=0.001         S=0.051 S=0.397 S=0.003 S=0.002 S=0.273 S=0.448

CETCH   0.0811 -0.1599  0.3760  0.4030  0.4202  0.5032          0.5020  0.0707  0.4567  0.4437 -0.0681  0.0531
       (   13) (   28) (   39) (   46) (   53) (   45)         (   13) (   28) (   39) (   46) (   53) (   45)
       S=0.396 S=0.208 S=0.009 S=0.003 S=0.001 S=0.001         S=0.040 S=0.360 S=0.002 S=0.001 S=0.314 S=0.364

CEBUS   0.0639  0.1256  0.1114  0.0508  0.2972  0.3121         -0.0915 -0.1623 -0.2388 -0.2372 -0.0715 -0.0593
       (   13) (   28) (   39) (   46) (   53) (   45)         (   13) (   28) (   39) (   46) (   53) (   45)
       S=0.418 S=0.262 S=0.250 S=0.369 S=0.015 S=0.018         S=0.383 S=0.205 S=0.072 S=0.056 S=0.305 S=0.349

CEOTH  -0.2615  0.1302  0.0863  0.2849  0.0813  0.1895         -0.0820 -0.1416 -0.0201  0.1475 -0.0329 -0.0610
       (   13) (   28) (   39) (   46) (   53) (   45)         (   13) (   28) (   39) (   46) (   53) (   45)
       S=0.194 S=0.265 S=0.301 S=0.027 S=0.281 S=0.106         S=0.395 S=0.236 S=0.452 S=0.164 S=0.408 S=0.345

DRIVE   0.1235  0.2179  0.3185  0.2783  0.1082  0.2249         -0.0786  0.1017  0.1786 -0.0548  0.0442  0.0625
       (   12) (   23) (   27) (   36) (   44) (   40)         (   12) (   23) (   27) (   36) (   44) (   40)
       S=0.351 S=0.139 S=0.053 S=0.050 S=0.242 S=0.082         S=0.4[illegible]5 S=0.322 S=0.186 S=0.375 S=0.388 S=0.351

       OSP03   OSP06   OSP09   OSP12   OSP15   OSP18           OCR     OCR     OCR     OCR     OCR     OCR

CETOT  -0.1620 -0.1861 -0.1148 -0.0363 -0.0417 -0.0271          0.2628  0.1586  0.1801  0.3002  0.3344  0.2807
       (   31) (   47) (   44) (   56) (   65) (   55)         (   34) (   34) (   34) (   34) (   34) (   34)
       S=0.192 S=0.105 S=0.229 S=0.395 S=0.371 S=0.422         S=0.067 S=0.185 S=0.154 S=0.042 S=0.027 S=0.054

CETCH  -0.1378 -0.1670 -0.1349 -0.0803 -0.1383 -0.1215          0.1781  0.1206  0.1392  0.1931  0.2176  0.1303
       (   31) (   47) (   44) (   56) (   65) (   55)         (   34) (   34) (   34) (   34) (   34) (   34)
       S=0.230 S=0.104 S=0.191 S=0.278 S=0.136 S=0.188         S=0.157 S=0.248 S=0.216 S=0.137 S=0.108 S=0.231

CEBUS  -0.0883  0.0619  0.2072  0.2464  0.3925  0.2371          0.2011  0.1924  0.2075  0.2673  0.3454  0.4024
       (   31) (   47) (   44) (   56) (   65) (   55)         (   34) (   34) (   34) (   34) (   34) (   34)
       S=0.318 S=0.340 S=0.089 S=0.034 S=0.001 S=0.041         S=0.127 S=0.138 S=0.119 S=0.063 S=0.023 S=0.009

CEOTH  -0.0516 -0.0670 -0.0553 -0.0717 -0.1427  0.0356         99.0000 -0.2354 -0.2354  0.1580  0.2785  0.2166
       (   31) (   47) (   44) (   56) (   65) (   55)         (   34) (   34) (   34) (   34) (   34) (   34)
       S=0.391 S=0.280 S=0.269 S=0.300 S=0.128 S=0.387         S=***** S=0.090 S=0.090 S=0.186 S=0.055 S=0.109

DRIVE  -0.0203 -0.0468  0.1188  0.1886  0.2399  0.0363          0.2753  0.2753  0.2753  0.2753  0.2753  0.2753
       (   23) (   34) (   31) (   42) (   51) (   47)         (   27) (   27) (   27) (   27) (   27) (   27)
       S=0.463 S=0.396 S=0.262 S=0.116 S=0.045 S=0.404         S=0.082 S=0.082 S=0.082 S=0.082 S=0.082 S=0.082

       OCM03   OCM06   OCM09   OCM12   OCM15   OCM18           OCT03   OCT06   OCT09   OCT12   OCT15   OCT18

CETOT  -0.0319 -0.0339 -0.3318 -0.1691 -0.2226 -0.2788         -0.4627 -0.1734  0.1464  0.1014  0.0333  0.1791
       (   30) (   48) (   45) (   57) (   66) (   55)         (   31) (   49) (   46) (   58) (   67) (   55)
       S=0.433 S=0.410 S=0.013 S=0.104 S=0.036 S=0.020         S=0.004 S=0.117 S=0.166 S=0.224 S=0.394 S=0.095

CETCH  -0.0630 -0.0387 -0.3057 -0.1225 -0.1081 -0.1797         -0.4579 -0.1683  0.1452  0.1035  0.0683  0.2311
       (   30) (   48) (   45) (   57) (   66) (   55)         (   31) (   49) (   46) (   58) (   67) (   55)
       S=0.370 S=0.397 S=0.021 S=0.182 S=0.194 S=0.095         S=0.005 S=0.124 S=0.168 S=0.220 S=0.292 S=0.045

CEBUS   0.1281  0.0093 -0.2524 -0.2813 -0.5036 -0.3599         -0.0360 -0.1029  0.0382 -0.0336 -0.1346 -0.0663
       (   30) (   48) (   45) (   57) (   66) (   55)         (   31) (   49) (   46) (   58) (   67) (   55)
       S=0.250 S=0.475 S=0.047 S=0.017 S=0.001 S=0.003         S=0.424 S=0.241 S=0.401 S=0.401 S=0.139 S=0.315

CEOTH   0.0657  0.0994  0.0799  0.0999  0.0921 -0.0115          0.2430  0.2740 -0.0620  0.0592  0.0411 -0.0517
       (   30) (   48) (   45) (   57) (   66) (   55)         (   31) (   49) (   46) (   58) (   67) (   55)
       S=0.365 S=0.251 S=0.301 S=0.230 S=0.231 S=0.467         S=0.094 S=0.028 S=0.341 S=0.329 S=0.370 S=0.354

DRIVE   0.0841  0.1217  0.0414 -0.0566  0.1078 -0.0357         -0.0871 -0.2975 -0.2650 -0.1037 -0.0601  0.0360
       (   21) (   34) (   31) (   42) (   52) (   47)         (   22) (   35) (   32) (   43) (   53) (   47)
       S=0.359 S=0.245 S=0.413 S=0.339 S=0.223 S=0.406         S=0.35[illegible] S=0.141 S=0.071 S=0.254 S=0.335 S=0.405
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APPENDIX 9F

CE AND DRIVE vs. OUTCOMES

Total Group - Top Schools

```
         OAC03    OAC06    OAC09    OAC12    OAC15    OAC18            ORC03    ORC06    ORC09    ORC12    ORC15    ORC18

CETOT  -0.1315  -0.0465   0.2221   0.5618   0.4465   0.6943           0.1160   0.4038   0.3643   0.4673  -0.0287   0.0008
       (    29) (    47) (    48) (    53) (    53) (    45)          (    29) (    47) (    48) (    53) (    53) (    45)
       S=0.248  S=0.378  S=0.065  S=0.001  S=0.001  S=0.001           S=0.275  S=0.002  S=0.005  S=0.001  S=0.419  S=0.498

CETCH  -0.2092  -0.1907   0.1439   0.5137   0.3828   0.6571           0.1520   0.4110   0.3779   0.4740  -0.0226   0.0114
       (    29) (    47) (    48) (    53) (    53) (    45)          (    29) (    47) (    48) (    53) (    53) (    45)
       S=0.138  S=0.100  S=0.165  S=0.001  S=0.002  S=0.001           S=0.216  S=0.002  S=0.004  S=0.001  S=0.436  S=0.470

CEBUS   0.1023   0.3628   0.2594   0.4110   0.3614   0.5182          -0.1087   0.0828  -0.0092   0.1388  -0.0333  -0.0436
       (    29) (    47) (    48) (    53) (    53) (    45)          (    29) (    47) (    48) (    53) (    53) (    45)
       S=0.299  S=0.006  S=0.038  S=0.001  S=0.004  S=0.001           S=0.287  S=0.290  S=0.475  S=0.161  S=0.406  S=0.388

CEOTH   0.0022   0.1062   0.2437   0.2381   0.2804  -0.0167           0.0489   0.0145   0.0649   0.1339  -0.0118   0.0377
       (    29) (    47) (    48) (    53) (    53) (    45)          (    29) (    47) (    48) (    53) (    53) (    45)
       S=0.496  S=0.239  S=0.048  S=0.043  S=0.021  S=0.457           S=0.401  S=0.461  S=0.331  S=0.170  S=0.467  S=0.403

DRIVE   0.1626   0.2353   0.0869   0.1881  -0.0896   0.2773           0.5002   0.1257   0.1369   0.1861   0.0651   0.0646
       (    24) (    37) (    38) (    43) (    44) (    38)          (    24) (    37) (    38) (    43) (    44) (    38)
       S=0.224  S=0.080  S=0.302  S=0.114  S=0.282  S=0.046           S=0.005  S=0.229  S=0.206  S=0.116  S=0.337  S=0.350


         OSP03    OSP06    OSP09    OSP12    OSP15    OSP18            OCR      OCR      OCR      OCR      OCR      OCR

CETOT  -0.1107  -0.1637  -0.1646  -0.1022  -0.1042   0.1400          -0.0139   0.0725   0.0844   0.0854   0.0265   0.0084
       (    57) (    69) (    68) (    67) (    67) (    51)          (    52) (    52) (    52) (    52) (    52) (    52)
       S=0.206  S=0.089  S=0.090  S=0.205  S=0.201  S=0.164           S=0.461  S=0.305  S=0.276  S=0.274  S=0.426  S=0.477

CETCH  -0.0798  -0.1661  -0.1603  -0.1444  -0.1265   0.0785          -0.0554   0.0542   0.0910   0.0999   0.0896   0.0589
       (    57) (    69) (    68) (    67) (    67) (    51)          (    52) (    52) (    52) (    52) (    52) (    52)
       S=0.277  S=0.086  S=0.096  S=0.122  S=0.154  S=0.292           S=0.348  S=0.351  S=0.261  S=0.240  S=0.264  S=0.339

CEBUS  -0.0563  -0.0015   0.0160   0.2355   0.0869   0.2935           0.1149   0.1299   0.1389   0.1487  -0.0590  -0.0494
       (    57) (    69) (    68) (    67) (    67) (    51)          (    52) (    52) (    52) (    52) (    52) (    52)
       S=0.238  S=0.495  S=0.449  S=0.025  S=0.242  S=0.018           S=0.209  S=0.179  S=0.163  S=0.146  S=0.339  S=0.364

CEOTH  -0.0876  -0.0163  -0.0604  -0.0612  -0.0600   0.0343           0.0427  -0.0243  -0.0424  -0.0619  -0.0522  -0.0524
       (    57) (    69) (    68) (    67) (    67) (    51)          (    52) (    52) (    52) (    52) (    52) (    52)
       S=0.259  S=0.447  S=0.312  S=0.311  S=0.315  S=0.406           S=0.382  S=0.432  S=0.383  S=0.332  S=0.357  S=0.356

DRIVE   0.1115  -0.0605  -0.0152   0.1204  -0.0116   0.1282           0.4220   0.4220   0.4220   0.4220   0.4220   0.4220
       (    46) (    55) (    53) (    53) (    52) (    41)          (    42) (    42) (    42) (    42) (    42) (    42)
       S=0.230  S=0.330  S=0.457  S=0.195  S=0.467  S=0.212           S=0.003  S=0.003  S=0.003  S=0.003  S=0.003  S=0.003


         OCM03    OCM06    OCM09    OCM12    OCM15    OCM18            OCT03    OCT06    OCT09    OCT12    OCT15    OCT18

CETOT   0.1139   0.0616  -0.1063  -0.0113  -0.0806  -0.4119          -0.2201  -0.1990  -0.1326  -0.1757  -0.1845   0.1932
       (    61) (    76) (    72) (    72) (    71) (    53)          (    61) (    76) (    72) (    72) (    71) (    53)
       S=0.191  S=0.298  S=0.187  S=0.462  S=0.252  S=0.001           S=0.044  S=0.042  S=0.133  S=0.070  S=0.062  S=0.083

CETCH   0.0541   0.0618  -0.0749  -0.0070  -0.0509  -0.3383          -0.2607  -0.2955  -0.1623  -0.2027  -0.1715   0.2168
       (    61) (    76) (    72) (    72) (    71) (    53)          (    61) (    76) (    72) (    72) (    71) (    53)
       S=0.339  S=0.298  S=0.266  S=0.477  S=0.337  S=0.007           S=0.021  S=0.005  S=0.087  S=0.044  S=0.076  S=0.059

CEBUS   0.1285   0.0542  -0.2404  -0.2510  -0.1845  -0.4731           0.1237   0.2065   0.1419  -0.0640  -0.1461   0.0419
       (    61) (    76) (    72) (    72) (    71) (    53)          (    61) (    76) (    72) (    72) (    71) (    53)
       S=0.162  S=0.321  S=0.021  S=0.017  S=0.062  S=0.001           S=0.171  S=0.037  S=0.117  S=0.297  S=0.112  S=0.383

CEOTH   0.1922  -0.0253  -0.0677   0.2743   0.0161  -0.0754           0.0972   0.1033   0.0222   0.1721  -0.0056  -0.2156
       (    61) (    76) (    72) (    72) (    71) (    53)          (    61) (    76) (    72) (    72) (    71) (    53)
       S=0.069  S=0.414  S=0.286  S=0.010  S=0.447  S=0.296           S=0.228  S=0.187  S=0.427  S=0.074  S=0.482  S=0.061

DRIVE  -0.0519   0.1724  -0.0838  -0.2259   0.0069  -0.2773           0.0554   0.1676   0.0398  -0.0029  -0.0666  -0.1020
       (    48) (    59) (    55) (    56) (    56) (    43)          (    48) (    59) (    55) (    56) (    56) (    43)
       S=0.363  S=0.096  S=0.271  S=0.047  S=0.480  S=0.036           S=0.354  S=0.102  S=0.386  S=0.492  S=0.313  S=0.258
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APPENDIX 9G

CE AND DRIVE vs. OUTCOMES

Total Group - Low GPA

APPENDIX 9H

```
        OAC03    OAC06    OAC09    OAC12    OAC15    OAC18         ORC03    ORC06    ORC09    ORC12    ORC15    ORC18

CETOT   0.0641   0.0657   0.2780   0.3200   0.2085   0.4926         0.1364  -0.0014  -0.0032  -0.0466  -0.0415   0.1040
       (   27)  (   32)  (   44)  (   45)  (   52)  (   36)      (   27)  (   32)  (   44)  (   45)  (   52)  (   36)
       S=0.375  S=0.361  S=0.034  S=0.016  S=0.069  S=0.001      S=0.249  S=0.497  S=0.492  S=0.380  S=0.385  S=0.273

CETCH   0.0002   0.0142   0.2292   0.3506   0.1990   0.3852         0.1463  -0.0044  -0.0039   0.0054   0.0191   0.1453
       (   27)  (   32)  (   44)  (   45)  (   52)  (   36)      (   27)  (   32)  (   44)  (   45)  (   52)  (   36)
       S=0.500  S=0.469  S=0.067  S=0.009  S=0.079  S=0.010      S=0.233  S=0.490  S=0.490  S=0.486  S=0.446  S=0.199

CEBUS   0.2399   0.4171   0.3142  -0.1465   0.0455   0.1775        -0.0118   0.0086   0.0159  -0.1647  -0.0316   0.0251
       (   27)  (   32)  (   44)  (   45)  (   52)  (   36)      (   27)  (   32)  (   44)  (   45)  (   52)  (   36)
       S=0.114  S=0.009  S=0.019  S=0.168  S=0.374  S=0.150      S=0.477  S=0.481  S=0.459  S=0.140  S=0.412  S=0.442

CEOTH   0.0707   0.3566  -0.0351  -0.0841   0.0299   0.2565        -0.1002   0.0513  -0.1185  -0.2535  -0.2164  -0.1548
       (   27)  (   32)  (   44)  (   45)  (   52)  (   36)      (   27)  (   32)  (   44)  (   45)  (   52)  (   36)
       S=0.363  S=0.023  S=0.411  S=0.291  S=0.417  S=0.066      S=0.309  S=0.390  S=0.222  S=0.046  S=0.062  S=0.184

DRIVE  -0.0187   0.1668   0.2358   0.0371  -0.0671   0.0421        -0.2300  -0.1414   0.0897  -0.2788  -0.0769  -0.1193
       (   25)  (   29)  (   33)  (   34)  (   42)  (   31)      (   25)  (   29)  (   33)  (   34)  (   42)  (   31)
       S=0.455  S=0.198  S=0.092  S=0.418  S=0.482  S=0.411      S=0.134  S=0.236  S=0.310  S=0.055  S=0.314  S=0.261

        OSP03    OSP06    OSP09    OSP12    OSP15    OSP18         OCR      OCR      OCR      OCR      OCR      OCR

CETOT  -0.1552  -0.1623  -0.0322   0.0081   0.0417   0.0596        -0.0407   0.0458  -0.0049   0.0860   0.1160   0.1354
       (   52)  (   57)  (   56)  (   61)  (   61)  (   54)      (   47)  (   47)  (   47)  (   47)  (   47)  (   47)
       S=0.130  S=0.114  S=0.407  S=0.475  S=0.375  S=0.334      S=0.393  S=0.380  S=0.487  S=0.283  S=0.219  S=0.182

CETCH  -0.1444  -0.1588  -0.0249   0.0015   0.0650  -0.0475         0.0169   0.0654  -0.0340   0.0113   0.0276   0.0262
       (   52)  (   57)  (   56)  (   61)  (   61)  (   54)      (   47)  (   47)  (   47)  (   47)  (   47)  (   47)
       S=0.153  S=0.119  S=0.428  S=0.495  S=0.309  S=0.367      S=0.455  S=0.331  S=0.410  S=0.470  S=0.427  S=0.431

CEBUS  -0.0583  -0.0018  -0.0294   0.0192  -0.0106   0.1992        -0.1442  -0.1155   0.0479   0.1313   0.1671   0.2166
       (   52)  (   57)  (   56)  (   61)  (   61)  (   54)      (   47)  (   47)  (   47)  (   47)  (   47)  (   47)
       S=0.341  S=0.495  S=0.415  S=0.442  S=0.468  S=0.074      S=0.167  S=0.220  S=0.375  S=0.190  S=0.131  S=0.072

CEOTH  -0.0582  -0.0361  -0.0400  -0.0224  -0.0558   0.0353         0.1322   0.2269   0.2269   0.2021   0.2383   0.2262
       (   52)  (   57)  (   56)  (   61)  (   61)  (   54)      (   47)  (   47)  (   47)  (   47)  (   47)  (   47)
       S=0.341  S=0.395  S=0.385  S=0.432  S=0.335  S=0.400      S=0.188  S=0.063  S=0.063  S=0.087  S=0.053  S=0.063

DRIVE   0.1343   0.1039   0.1712   0.1658   0.1534   0.1287         0.3577   0.3577   0.3577   0.3577   0.3577   0.3577
       (   39)  (   42)  (   38)  (   44)  (   47)  (   43)      (   40)  (   40)  (   40)  (   40)  (   40)  (   40)
       S=0.174  S=0.256  S=0.152  S=0.141  S=0.152  S=0.205      S=0.012  S=0.012  S=0.012  S=0.012  S=0.012  S=0.012

        OCM03    OCM06    OCM09    OCM12    OCM15    OCM18         OCT03    OCT06    OCT09    OCT12    OCT15    OCT18

CETOT   0.1433   0.0285  -0.2724  -0.0689  -0.2460  -0.2548         0.0637  -0.0879   0.0467  -0.0254   0.0671  -0.0923
       (   51)  (   58)  (   58)  (   63)  (   63)  (   55)      (   53)  (   60)  (   59)  (   64)  (   64)  (   55)
       S=0.158  S=0.416  S=0.019  S=0.296  S=0.026  S=0.030      S=0.325  S=0.252  S=0.363  S=0.421  S=0.299  S=0.251

CETCH   0.1302   0.0593  -0.2101  -0.0253  -0.1888  -0.1754         0.1008  -0.0614   0.0314  -0.0562   0.0393  -0.1142
       (   51)  (   58)  (   58)  (   63)  (   63)  (   55)      (   53)  (   60)  (   59)  (   64)  (   64)  (   55)
       S=0.181  S=0.329  S=0.057  S=0.422  S=0.069  S=0.100      S=0.236  S=0.321  S=0.407  S=0.330  S=0.379  S=0.203

CEBUS   0.0515  -0.2177  -0.2816  -0.0981  -0.1462  -0.2183        -0.1700  -0.1954   0.0693   0.0838   0.0841  -0.0694
       (   51)  (   58)  (   58)  (   63)  (   63)  (   55)      (   53)  (   60)  (   59)  (   64)  (   64)  (   55)
       S=0.360  S=0.050  S=0.016  S=0.222  S=0.126  S=0.055      S=0.112  S=0.067  S=0.301  S=0.255  S=0.254  S=0.307

CEOTH   0.0466  -0.0374   0.1435  -0.0917  -0.0679  -0.0637         0.0966   0.0449  -0.0361  -0.0736  -0.0330   0.0985
       (   51)  (   58)  (   58)  (   63)  (   63)  (   55)      (   53)  (   60)  (   59)  (   64)  (   64)  (   55)
       S=0.373  S=0.390  S=0.141  S=0.237  S=0.298  S=0.322      S=0.246  S=0.367  S=0.393  S=0.282  S=0.398  S=0.237

DRIVE   0.0763  -0.0205  -0.2914  -0.2408  -0.2722  -0.1950         0.1426   0.0680  -0.0871   0.0536   0.0440   0.0941
       (   38)  (   42)  (   40)  (   45)  (   49)  (   44)      (   47)  (   44)  (   41)  (   46)  (   50)  (   44)
       S=0.324  S=0.449  S=0.034  S=0.056  S=0.029  S=0.102      S=0.190  S=0.330  S=0.294  S=0.362  S=0.381  S=0.272
```

CE AND DRIVE vs. OUTCOMES

Total Group - Mid GPA

```
         OAC03    OAC06    OAC09    OAC12    OAC15    OAC18

CETOT  -0.1604  -0.0456   0.4066   0.5093   0.4717   0.1539
       (    32) (    44) (    43) (    48) (    46) (    44)
       S=0.190  S=0.375  S=0.003  S=0.001  S=0.001  S=0.159

CETCH  -0.2436  -0.0939   0.3955   0.5101   0.3924  -0.0414
       (    32) (    44) (    43) (    48) (    46) (    44)
       S=0.090  S=0.272  S=0.004  S=0.001  S=0.003  S=0.395

CEBUS   0.1750   0.0482   0.1572   0.2046   0.4067   0.4738
       (    32) (    44) (    43) (    48) (    46) (    44)
       S=0.169  S=0.378  S=0.157  S=0.082  S=0.003  S=0.001

CEOTH   0.4992   0.4415  -0.0414   0.1003   0.3209   0.2390
       (    32) (    44) (    43) (    48) (    46) (    44)
       S=0.002  S=0.001  S=0.396  S=0.249  S=0.015  S=0.059

DRIVE   0.1988   0.1433   0.3036   0.0313   0.0252  -0.0087
       (    30) (    41) (    39) (    42) (    40) (    38)
       S=0.159  S=0.182  S=0.033  S=0.422  S=0.436  S=0.479

         OSP03    OSP06    OSP09    OSP12    OSP15    OSP18

CETOT  -0.1655  -0.2491  -0.1541  -0.0065  -0.1129  -0.1756
       (    49) (    59) (    57) (    68) (    64) (    55)
       S=0.101  S=0.029  S=0.126  S=0.479  S=0.187  S=0.100

CETCH  -0.1669  -0.2430  -0.1886  -0.0306  -0.1145  -0.2099
       (    49) (    59) (    57) (    68) (    64) (    55)
       S=0.126  S=0.032  S=0.080  S=0.402  S=0.184  S=0.062

CEBUS  -0.0595  -0.0182   0.2393   0.1746  -0.0434   0.0310
       (    49) (    59) (    57) (    68) (    64) (    55)
       S=0.342  S=0.445  S=0.037  S=0.077  S=0.367  S=0.411

CEOTH  -0.0559  -0.0575  -0.0798  -0.0448  -0.0353   0.0603
       (    49) (    59) (    57) (    68) (    64) (    55)
       S=0.351  S=0.333  S=0.278  S=0.358  S=0.391  S=0.331

DRIVE  -0.0111   0.0146   0.0328   0.2347   0.1752   0.2003
       (    40) (    49) (    48) (    55) (    50) (    44)
       S=0.473  S=0.460  S=0.412  S=0.042  S=0.112  S=0.096

         OCM03    OCM06    OCM09    OCM12    OCM15    OCM18

CETOT(  0.0762  -0.0224   0.0607  -0.0771  -0.0075   0.0465
       (    51) (    64) (    60) (    70) (    65) (    55)
       S=0.298  S=0.430  S=0.322  S=0.263  S=0.476  S=0.368

CETCH(  0.0327  -0.0860   0.0950  -0.0361   0.0815   0.1273
       (    51) (    64) (    60) (    70) (    65) (    55)
       S=0.410  S=0.250  S=0.235  S=0.383  S=0.259  S=0.177

CEBUS(  0.1071   0.1234  -0.1784  -0.3034  -0.3111  -0.2114
       (    51) (    64) (    60) (    70) (    65) (    55)
       S=0.227  S=0.166  S=0.086  S=0.005  S=0.006  S=0.061

CEOTH(  0.2373   0.2642  -0.0515   0.0010  -0.0619   0.0165
       (    51) (    64) (    60) (    70) (    65) (    55)
       S=0.047  S=0.017  S=0.348  S=0.497  S=0.312  S=0.452

DRIVE· -0.1173  -0.0376  -0.0023   0.0889   0.0687  -0.0847
       (    41) (    53) (    50) (    56) (    51) (    44)
       S=0.233  S=0.395  S=0.494  S=0.257  S=0.316  S=0.292
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```
ORC03    ORC06    ORC09    ORC12    ORC15    ORC18

 0.1567   0.0967   0.3512   0.3524   0.1378  -0.0375
(    32) (    44) (    43) (    48) (    46) (    44)
S=0.196  S=0.266  S=0.010  S=0.007  S=0.181  S=0.404

 0.1452   0.0998   0.3536   0.3206   0.0753  -0.1069
(    32) (    44) (    43) (    48) (    46) (    44)
S=0.214  S=0.260  S=0.010  S=0.013  S=0.310  S=0.245

 0.0317   0.0136   0.0646   0.2712   0.1366   0.1063
(    32) (    44) (    43) (    48) (    46) (    44)
S=0.432  S=0.465  S=0.340  S=0.031  S=0.183  S=0.246

 0.0416  -0.1066  -0.0594   0.2110   0.2372   0.2230
(    32) (    44) (    43) (    48) (    46) (    44)
S=0.411  S=0.245  S=0.352  S=0.075  S=0.056  S=0.073

 0.0075   0.2153   0.2497  -0.0198  -0.0498   0.0161
(    30) (    41) (    39) (    42) (    40) (    38)
S=0.484  S=0.088  S=0.063  S=0.451  S=0.380  S=0.462

OCR      OCR      OCR      OCR      OCR      OCR

 0.2487   0.2713   0.1975   0.1553   0.1772   0.1724
(    47) (    47) (    47) (    47) (    47) (    47)
S=0.046  S=0.033  S=0.092  S=0.149  S=0.117  S=0.123

 0.1824   0.2208   0.1472   0.0874   0.0945   0.0660
(    47) (    47) (    47) (    47) (    47) (    47)
S=0.110  S=0.068  S=0.162  S=0.280  S=0.264  S=0.330

 0.1628   0.1414   0.1519   0.1625   0.1942   0.2602
(    47) (    47) (    47) (    47) (    47) (    47)
S=0.137  S=0.172  S=0.154  S=0.138  S=0.095  S=0.039

 0.1909   0.0663   0.0762   0.1412   0.1550   0.1176
(    47) (    47) (    47) (    47) (    47) (    47)
S=0.099  S=0.329  S=0.305  S=0.172  S=0.149  S=0.216

 0.1222   0.1222   0.1222   0.1222   0.1222   0.1222
(    44) (    44) (    44) (    44) (    44) (    44)
S=0.215  S=0.215  S=0.215  S=0.215  S=0.215  S=0.215

OCT03    OCT06    OCT09    OCT12    OCT15    OCT18

-0.0405   0.0507   0.0597   0.0352   0.0670   0.1858
(    51) (    64) (    60) (    70) (    65) (    55)
S=0.389  S=0.346  S=0.325  S=0.386  S=0.298  S=0.087

-0.0661   0.0266   0.0390   0.0428   0.0876   0.1385
(    51) (    64) (    60) (    70) (    65) (    55)
S=0.323  S=0.417  S=0.384  S=0.363  S=0.244  S=0.157

 0.0633   0.0401  -0.0184  -0.1313  -0.0397   0.1290
(    51) (    64) (    60) (    70) (    65) (    55)
S=0.329  S=0.377  S=0.444  S=0.139  S=0.377  S=0.174

 0.1019   0.1233   0.1768   0.1823   0.0026   0.1297
(    51) (    64) (    60) (    70) (    65) (    55)
S=0.238  S=0.166  S=0.088  S=0.065  S=0.492  S=0.173

-0.2163  -0.0935   0.0695  -0.1460  -0.1314  -0.0282
(    41) (    53) (    50) (    56) (    51) (    44)
S=0.087  S=0.253  S=0.316  S=0.141  S=0.179  S=0.428
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CE AND DRIVE vs. OUTCOMES

Total Group - High GPA

APPENDIX 9J

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      OAC03    OAC06    OAC09    OAC12    OAC15    OAC18        ORC03    ORC06    ORC09    ORC12    ORC15    ORC18

CETOT -0.1460  -0.1263   0.2807   0.4825   0.2743   0.2332       0.0935   0.0489   0.1745   0.2322   0.0332   0.0697
      (    50) (    59) (    57) (    62) (    57) (    49)     (    50) (    59) (    57) (    62) (    57) (    49)
      S=0.156  S=0.170  S=0.017  S=0.001  S=0.019  S=0.053      S=0.259  S=0.357  S=0.097  S=0.035  S=0.403  S=0.317

CETCH -0.2232  -0.1804   0.2748   0.4696   0.2405   0.1190       0.1090   0.0262   0.1651   0.2353   0.0558   0.0474
      (    50) (    59) (    57) (    62) (    57) (    49)     (    50) (    59) (    57) (    62) (    57) (    49)
      S=0.060  S=0.086  S=0.019  S=0.001  S=0.036  S=0.208      S=0.226  S=0.422  S=0.110  S=0.033  S=0.340  S=0.373

CEBUS  0.2937   0.1666   0.1162   0.2150   0.2036   0.2012      -0.0680   0.1141   0.1778   0.1088   0.0125   0.0829
      (    50) (    59) (    57) (    62) (    57) (    49)     (    50) (    59) (    57) (    62) (    57) (    49)
      S=0.019  S=0.104  S=0.195  S=0.047  S=0.064  S=0.083      S=0.319  S=0.195  S=0.093  S=0.200  S=0.463  S=0.286

CEOTH  0.2325   0.3243  -0.0639   0.0791   0.0435   0.1852      -0.0195  -0.0563  -0.0921  -0.1389  -0.1277  -0.0198
      (    50) (    59) (    57) (    62) (    57) (    49)     (    50) (    59) (    57) (    62) (    57) (    49)
      S=0.052  S=0.006  S=0.318  S=0.271  S=0.374  S=0.101      S=0.447  S=0.336  S=0.248  S=0.141  S=0.172  S=0.446

DRIVE  0.2144   0.2284   0.3139   0.0278   0.0613   0.1002      -0.0325   0.1579   0.2842  -0.0439   0.0778   0.2160
      (    46) (    55) (    50) (    53) (    50) (    44)     (    46) (    55) (    50) (    53) (    50) (    44)
      S=0.075  S=0.047  S=0.013  S=0.422  S=0.336  S=0.259      S=0.415  S=0.125  S=0.023  S=0.378  S=0.296  S=0.080


      OSP03    OSP06    OSP09    OSP12    OSP15    OSP18        OCR      OCR      OCR      OCR      OCR      OCR

CETOT -0.1381  -0.1782  -0.0480  -0.0158  -0.1282  -0.1627      -0.0432   0.0643   0.0273   0.0415   0.0649   0.0982
      (    79) (    86) (    77) (    85) (    73) (    58)     (    62) (    62) (    62) (    62) (    62) (    62)
      S=0.112  S=0.050  S=0.339  S=0.429  S=0.140  S=0.111      S=0.369  S=0.310  S=0.416  S=0.374  S=0.308  S=0.224

CETCH -0.1234  -0.1764  -0.0505  -0.0172  -0.1053  -0.2713      -0.0434   0.0473  -0.0109  -0.0282  -0.0264  -0.0100
      (    79) (    86) (    77) (    85) (    73) (    58)     (    62) (    62) (    62) (    62) (    62) (    62)
      S=0.139  S=0.052  S=0.331  S=0.438  S=0.188  S=0.020      S=0.369  S=0.357  S=0.467  S=0.414  S=0.419  S=0.469

CEBUS -0.0562  -0.0132   0.0266   0.0053  -0.0684   0.1226      -0.0355   0.0251   0.0728   0.1160   0.1615   0.2105
      (    79) (    86) (    77) (    85) (    73) (    58)     (    62) (    62) (    62) (    62) (    62) (    62)
      S=0.311  S=0.452  S=0.409  S=0.481  S=0.283  S=0.180      S=0.392  S=0.423  S=0.287  S=0.185  S=0.105  S=0.050

CEOTH -0.0458  -0.0259  -0.0636  -0.0767  -0.0550   0.0053       0.1693   0.1649   0.0812   0.1488   0.1718   0.1282
      (    79) (    86) (    77) (    85) (    73) (    58)     (    62) (    62) (    62) (    62) (    62) (    62)
      S=0.344  S=0.407  S=0.291  S=0.243  S=0.310  S=0.262      S=0.094  S=0.100  S=0.265  S=0.124  S=0.091  S=0.160

DRIVE -0.0129  -0.0257   0.1431   0.2185   0.2067  -0.0116       0.2545   0.2545   0.2545   0.2545   0.2545   0.2545
      (    62) (    70) (    61) (    68) (    59) (    49)     (    57) (    57) (    57) (    57) (    57) (    57)
      S=0.460  S=0.416  S=0.136  S=0.037  S=0.058  S=0.465      S=0.028  S=0.028  S=0.028  S=0.028  S=0.028  S=0.028


      OCM03    OCM06    OCM09    OCM12    OCM15    OCM18        OCT03    OCT06    OCT09    OCT12    OCT15    OCT18

CETOT  0.1878  -0.0016  -0.0592  -0.0855   0.0311  -0.0576       0.0393  -0.0233   0.1102   0.0370   0.1277   0.1061
      (    80) (    92) (    81) (    87) (    76) (    59)     (    81) (    93) (    81) (    87) (    76) (    59)
      S=0.048  S=0.494  S=0.300  S=0.216  S=0.395  S=0.332      S=0.364  S=0.412  S=0.164  S=0.367  S=0.136  S=0.212

CETCH  0.1658  -0.0055  -0.0189  -0.0644   0.0908   0.0433       0.0588  -0.0499   0.0942   0.0262   0.1157   0.0926
      (    80) (    92) (    81) (    87) (    76) (    59)     (    81) (    93) (    81) (    87) (    76) (    59)
      S=0.071  S=0.479  S=0.433  S=0.277  S=0.218  S=0.372      S=0.301  S=0.317  S=0.201  S=0.405  S=0.160  S=0.243

CEBUS  0.0560  -0.0428  -0.2341  -0.1423  -0.1351  -0.1734      -0.0929   0.0628  -0.0118  -0.0230   0.0667   0.0095
      (    80) (    92) (    81) (    87) (    76) (    59)     (    81) (    93) (    81) (    87) (    76) (    59)
      S=0.311  S=0.343  S=0.018  S=0.094  S=0.122  S=0.095      S=0.205  S=0.275  S=0.[illegible] S=0.416  S=0.283  S=0.471

CEOTH  0.1843   0.1566  -0.0122   0.2039  -0.0490  -0.0826       0.0448   0.1594   0.1513   0.2827  -0.0041   0.0974
      (    80) (    92) (    81) (    87) (    76) (    59)     (    81) (    93) (    81) (    87) (    76) (    59)
      S=0.051  S=0.068  S=0.457  S=0.029  S=0.337  S=0.267      S=0.346  S=0.063  S=0.089  S=0.004  S=0.486  S=0.232

DRIVE  0.0409   0.0053  -0.0807   0.0498   0.1802  -0.0898      -0.0349   0.0532   0.0431  -0.0533   0.0054   0.0595
      (    62) (    73) (    64) (    68) (    62) (    50)     (    63) (    74) (    64) (    68) (    62) (    50)
      S=0.376  S=0.479  S=0.253  S=0.343  S=0.081  S=0.268      S=0.393  S=0.335  S=0.368  S=0.333  S=0.483  S=0.316
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CE AND DRIVE vs. OUTCOMES

Total Group - Honors

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        OAC03    OAC06    OAC09    OAC12    OAC15    OAC18         ORC03    ORC06    ORC09    ORC12    ORC15    ORC18

CETOT  -0.0188   0.1347   0.2871   0.4380   0.4462   0.5460         0.2557   0.3769   0.2812   0.2540  -0.0112  -0.0001
       (    40) (    70) (    88) (    98) (   101) (    85)       (    40) (    70) (    88) (    98) (   101) (    85)
       S=0.454  S=0.133  S=0.003  S=0.001  S=0.001  S=0.001        S=0.056  S=0.001  S=0.004  S=0.002  S=0.456  S=0.500

CETCH  -0.0353   0.0291   0.2212   0.4171   0.3787   0.4571         0.2458   0.3979   0.2593   0.2920  -0.0123   0.0055
       (    40) (    70) (    88) (    98) (   101) (    85)       (    40) (    70) (    88) (    98) (   101) (    85)
       S=0.414  S=0.466  S=0.019  S=0.001  S=0.001  S=0.001        S=0.063  S=0.001  S=0.002  S=0.002  S=0.451  S=0.480

CEBUS   0.0429   0.1834   0.3516   0.2085   0.2983   0.4624         0.0704  -0.0057  -0.1677   0.0838  -0.0133  -0.0170
       (    40) (    70) (    88) (    98) (   101) (    85)       (    40) (    70) (    88) (    98) (   101) (    85)
       S=0.356  S=0.064  S=0.001  S=0.020  S=0.001  S=0.001        S=0.333  S=0.481  S=0.159  S=0.206  S=0.447  S=0.439

CEOTH  -0.0293   0.1433   0.1844   0.1736   0.3029   0.1328         0.0409   0.0284   0.0558   0.1227   0.0110  -0.0103
       (    40) (    70) (    88) (    98) (   101) (    85)       (    40) (    70) (    88) (    98) (   101) (    85)
       S=0.429  S=0.118  S=0.043  S=0.044  S=0.001  S=0.113        S=0.401  S=0.408  S=0.303  S=0.114  S=0.457  S=0.453

DRIVE   0.0533   0.1664   0.1280   0.2065  -0.0250   0.1777         0.2359   0.0588   0.1124   0.0924   0.0010  -0.0211
       (    35) (    56) (    68) (    78) (    83) (    72)       (    35) (    56) (    68) (    78) (    83) (    72)
       S=0.381  S=0.113  S=0.149  S=0.039  S=0.411  S=0.068        S=0.085  S=0.333  S=0.181  S=0.210  S=0.496  S=0.430

        OSP03    OSP06    OSP09    OSP12    OSP15    OSP18         OCR      OCR      OCR      OCR      OCR      OCR

CETOT  -0.1411  -0.1817  -0.1226  -0.0323  -0.0270   0.0707         0.0763   0.1013   0.0872   0.1027   0.0933   0.0816
       (    81) (   104) (   111) (   121) (   128) (   111)       (   158) (   158) (   158) (   158) (   158) (   158)
       S=0.104  S=0.032  S=0.100  S=0.363  S=0.381  S=0.230        S=0.170  S=0.103  S=0.138  S=0.100  S=0.122  S=0.154

CETCH  -0.1151  -0.1782  -0.1253  -0.1057  -0.0642   0.0511         0.0552   0.0994   0.0808   0.0989   0.1152   0.0864
       (    81) (   104) (   111) (   121) (   128) (   111)       (   158) (   158) (   158) (   158) (   158) (   158)
       S=0.145  S=0.035  S=0.095  S=0.124  S=0.236  S=0.297        S=0.246  S=0.107  S=0.156  S=0.108  S=0.075  S=0.140

CEBUS  -0.0494  -0.0054   0.0413   0.3310   0.1344   0.1059         0.0785   0.0834   0.1035   0.1191   0.0371   0.0648
       (    81) (   104) (   111) (   121) (   128) (   111)       (   158) (   158) (   158) (   158) (   158) (   158)
       S=0.331  S=0.478  S=0.333  S=0.001  S=0.065  S=0.134        S=0.163  S=0.149  S=0.098  S=0.068  S=0.322  S=0.209

CEOTH  -0.0604  -0.0309  -0.0470  -0.0087  -0.0271  -0.0341         0.0023  -0.0244  -0.0191  -0.0204   0.0077   0.0044
       (    81) (   104) (   111) (   121) (   128) (   111)       (   158) (   158) (   158) (   158) (   158) (   158)
       S=0.296  S=0.378  S=0.312  S=0.462  S=0.381  S=0.361        S=0.489  S=0.381  S=0.406  S=0.400  S=0.462  S=0.478

DRIVE   0.2417   0.0718   0.1119   0.1556   0.0401   0.2094         0.3630   0.3630   0.3630   0.3630   0.3630   0.3630
       (    65) (    81) (    85) (    93) (    98) (    87)       (   122) (   122) (   122) (   122) (   122) (   122)
       S=0.026  S=0.262  S=0.154  S=0.068  S=0.348  S=0.026        S=0.001  S=0.001  S=0.001  S=0.001  S=0.001  S=0.001

        OCM03    OCM06    OCM09    OCM12    OCM15    OCM18         OCT03    OCT06    OCT09    OCT12    OCT15    OCT18

CETOT   0.0447   0.0145  -0.0834  -0.0364  -0.1534  -0.2599        -0.2331  -0.1773  -0.0982  -0.1269  -0.1181   0.0273
       (    88) (   115) (   118) (   130) (   133) (   114)       (    89) (   116) (   119) (   131) (   134) (   114)
       S=0.340  S=0.439  S=0.185  S=0.341  S=0.039  S=0.003        S=0.014  S=0.028  S=0.144  S=0.074  S=0.087  S=0.387

CETCH  -0.0121  -0.0138  -0.0451   0.0027  -0.1016  -0.2105        -0.2946  -0.2381  -0.1218  -0.1397  -0.0974   0.0393
       (    88) (   115) (   118) (   130) (   133) (   114)       (    89) (   116) (   119) (   131) (   134) (   114)
       S=0.456  S=0.442  S=0.314  S=0.488  S=0.122  S=0.012        S=0.003  S=0.005  S=0.093  S=0.056  S=0.131  S=0.339

CEBUS   0.1124   0.0953  -0.2208  -0.2444  -0.2405  -0.2549         0.1423   0.0660   0.0968  -0.0576  -0.1234  -0.0179
       (    88) (   115) (   118) (   130) (   133) (   114)       (    89) (   116) (   119) (   131) (   134) (   114)
       S=0.149  S=0.155  S=0.008  S=0.003  S=0.003  S=0.003        S=0.092  S=0.241  S=0.147  S=0.257  S=0.078  S=0.425

CEOTH   0.1505   0.0116  -0.0701   0.0758  -0.0423   0.0019         0.1163   0.1098   0.0069   0.1000  -0.0232  -0.0034
       (    88) (   115) (   118) (   130) (   133) (   114)       (    89) (   116) (   119) (   131) (   134) (   114)
       S=0.081  S=0.451  S=0.225  S=0.136  S=0.314  S=0.492        S=0.139  S=0.120  S=0.470  S=0.128  S=0.395  S=0.486

DRIVE  -0.1154   0.0889  -0.1867  -0.2344  -0.2268  -0.2456        -0.0243   0.0294  -0.0702  -0.0777  -0.1727  -0.0621
       (    59) (    89) (    89) (    99) (   103) (    90)       (    70) (    91) (    90) (   100) (   104) (    90)
       S=0.173  S=0.204  S=0.040  S=0.010  S=0.011  S=0.010        S=0.421  S=0.392  S=0.255  S=0.221  S=0.040  S=0.281
```

CE AND DRIVE vs. OUTCOMES

Total Group - No Honors

```
       OAC03    OAC06    OAC09    OAC12    OAC15    OAC18         ORC03    ORC06    ORC09    ORC12    ORC15    ORC18

CETOT  -0.3097   0.0125   0.3462   0.5415   0.3272   0.6670         0.6164   0.1639   0.3220   0.3275  -0.0599   0.2283
      (    22) (    35) (    35) (    40) (    39) (    34)       (    22) (    35) (    35) (    40) (    39) (    34)
      S=0.080  S=0.472  S=0.021  S=0.001  S=0.021  S=0.001        S=0.001  S=0.173  S=0.030  S=0.020  S=0.359  S=0.100

CETCH  -0.3334  -0.0965   0.3168   0.5628   0.3260   0.5157         0.6212   0.1468   0.3458   0.3919   0.0[illegible]9   0.2977
      (    22) (    35) (    35) (    40) (    39) (    34)       (    22) (    35) (    35) (    40) (    39) (    34)
      S=0.065  S=0.291  S=0.032  S=0.001  S=0.021  S=0.001        S=0.001  S=0.200  S=0.021  S=0.006  S=0.[illegible]9  S=0.044

CEBUS   0.0394   0.2696   0.1841   0.1052   0.1477   0.5266        -0.0238   0.0169  -0.1922  -0.1175  -0.0191   0.1668
      (    22) (    35) (    35) (    40) (    39) (    34)       (    22) (    35) (    35) (    40) (    39) (    34)
      S=0.431  S=0.059  S=0.145  S=0.259  S=0.185  S=0.001        S=0.458  S=0.462  S=0.134  S=0.235  S=0.454  S=0.173

CEOTH   0.2393   0.2518   0.1795  -0.1441  -0.0127   0.1787        -0.0439   0.1237   0.0498  -0.2909  -0.2727  -0.1468
      (    22) (    35) (    35) (    40) (    39) (    34)       (    22) (    35) (    35) (    40) (    39) (    34)
      S=0.142  S=0.072  S=0.151  S=0.188  S=0.469  S=0.156        S=0.423  S=0.240  S=0.388  S=0.034  S=0.047  S=0.204

DRIVE  -0.0628  -0.1987   0.3019   0.0455  -0.1318   0.0663         0.2974  -0.0513  -0.1403  -0.3570  -0.2699  -0.1480
      (    22) (    33) (    35) (    40) (    39) (    34)       (    22) (    35) (    35) (    40) (    39) (    34)
      S=0.391  S=0.126  S=0.039  S=0.390  S=0.212  S=0.355        S=0.089  S=0.395  S=0.211  S=0.012  S=0.048  S=0.202

       OSP03    OSP06    OSP09    OSP12    OSP15    OSP18         OCR      OCR      OCR      OCR      OCR      OCR

CETOT  -0.2340  -0.1885   0.0095   0.2085   0.1279   0.1595         0.1328   0.0955  -0.0205  -0.0167  -0.0222  -0.0389
      (    33) (    46) (    42) (    43) (    42) (    37)       (    39) (    39) (    39) (    39) (    39) (    39)
      S=0.095  S=0.105  S=0.476  S=0.090  S=0.210  S=0.173        S=0.210  S=0.281  S=0.451  S=0.460  S=0.447  S=0.407

CETCH  -0.2184  -0.2047   0.0002   0.1934   0.1601   0.1449         0.1062   0.0626  -0.0753  -0.0656  -0.0742  -0.0685
      (    33) (    46) (    42) (    43) (    42) (    37)       (    39) (    39) (    39) (    39) (    39) (    39)
      S=0.111  S=0.086  S=0.500  S=0.107  S=0.156  S=0.196        S=0.260  S=0.353  S=0.324  S=0.346  S=0.327  S=0.339

CEBUS  -0.0603   0.0642   0.0500   0.1183   0.0334   0.1145         0.0749   0.0775   0.0724   0.0671   0.0628   0.0298
      (    33) (    46) (    42) (    43) (    42) (    37)       (    39) (    39) (    39) (    39) (    39) (    39)
      S=0.369  S=0.336  S=0.377  S=0.225  S=0.417  S=0.250        S=0.325  S=0.319  S=0.331  S=0.343  S=0.352  S=0.428

CEOTH  -0.1077  -0.0565  -0.0545  -0.0477  -0.0662   0.0092         0.1192   0.1062   0.1062   0.1095   0.1338   0.0509
      (    33) (    46) (    42) (    43) (    42) (    37)       (    39) (    39) (    39) (    39) (    39) (    39)
      S=0.275  S=0.355  S=0.366  S=0.381  S=0.294  S=0.478        S=0.235  S=0.260  S=0.260  S=0.254  S=0.208  S=0.379

DRIVE   0.0995   0.1139   0.0950   0.1138   0.1034  -0.0608         0.1553   0.1553   0.1553   0.1553   0.1553   0.1553
      (    33) (    46) (    42) (    43) (    42) (    37)       (    39) (    39) (    39) (    39) (    39) (    39)
      S=0.291  S=0.226  S=0.273  S=0.234  S=0.257  S=0.360        S=0.173  S=0.173  S=0.173  S=0.173  S=0.173  S=0.173

       OCM03    OCM06    OCM09    OCM12    OCM15    OCM18         OCT03    OCT06    OCT09    OCT12    OCT15    OCT18

CETOT   0.0706   0.0545  -0.0127  -0.2315  -0.2643  -0.4516         0.0458   0.1685   0.0471  -0.0699  -0.0524   0.2541
      (    33) (    49) (    42) (    43) (    42) (    36)       (    33) (    49) (    42) (    43) (    42) (    36)
      S=0.348  S=0.355  S=0.468  S=0.068  S=0.045  S=0.003        S=0.400  S=0.124  S=0.384  S=0.328  S=0.371  S=0.067

CETCH   0.0489   0.0537   0.0550  -0.1958  -0.2547  -0.2539         0.0536   0.0826   0.0040  -0.0888   0.0028   0.1324
      (    33) (    49) (    42) (    43) (    42) (    36)       (    33) (    49) (    42) (    43) (    42) (    36)
      S=0.394  S=0.357  S=0.365  S=0.104  S=0.052  S=0.068        S=0.384  S=0.286  S=0.490  S=0.286  S=0.493  S=0.221

CEBUS   0.0541   0.0021  -0.2912  -0.1746  -0.1698  -0.4462        -0.0891   0.1926   0.1922   0.0089  -0.1510   0.1820
      (    33) (    49) (    42) (    43) (    42) (    36)       (    33) (    49) (    42) (    43) (    42) (    36)
      S=0.382  S=0.494  S=0.031  S=0.131  S=0.141  S=0.003        S=0.311  S=0.092  S=0.111  S=0.477  S=0.170  S=0.144

CEOTH   0.1823   0.0097  -0.0274  -0.0761   0.0889  -0.1185         0.0937   0.2803  -0.0306   0.2091   0.0414   0.1901
      (    33) (    49) (    42) (    43) (    42) (    36)       (    33) (    49) (    42) (    43) (    42) (    36)
      S=0.155  S=0.474  S=0.432  S=0.314  S=0.288  S=0.246        S=0.302  S=0.026  S=0.424  S=0.089  S=0.397  S=0.133

DRIVE  -0.2027   0.0655  -0.1965  -0.2478  -0.2363  -0.1393         0.1148   0.0394  -0.0455  -0.0472  -0.1229  -0.1778
      (    33) (    49) (    42) (    43) (    42) (    36)       (    33) (    49) (    42) (    43) (    42) (    36)
      S=0.129  S=0.327  S=0.113  S=0.055  S=0.066  S=0.209        S=0.262  S=0.394  S=0.387  S=0.382  S=0.219  S=0.150
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CE AND DRIVE vs. OUTCOMES

Total Group - Low IPR

APPENDIX 9M

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        OAC03    OAC06    OAC09    OAC12    OAC15    OAC18          ORC03    ORC06    ORC09    ORC12    ORC15    ORC18

CETOT  -0.0601   0.2005   0.3680   0.4721   0.3353   0.3893        -0.2316   0.3735   0.3023   0.3614   0.4680   0.3302
       (    15) (    23) (    28) (    25) (    29) (    24)       (    15) (    23) (    28) (    25) (    29) (    24)
       S=0.416  S=0.180  S=0.027  S=0.009  S=0.038  S=0.030        S=0.203  S=0.040  S=0.059  S=0.038  S=0.005  S=0.058

CETCH  -0.0460   0.1794   0.3571   0.4812   0.2177   0.2759        -0.2351   0.3678   0.2847   0.3028   0.4559   0.2724
       (    15) (    23) (    28) (    25) (    29) (    24)       (    15) (    23) (    28) (    25) (    29) (    24)
       S=0.435  S=0.206  S=0.031  S=0.007  S=0.128  S=0.096        S=0.199  S=0.042  S=0.071  S=0.071  S=0.006  S=0.099

CEBUS  -0.1355   0.2971   0.2224   0.1688   0.3094   0.4870         0.1929   0.0527   0.3765   0.3495   0.1419   0.2169
       (    15) (    23) (    28) (    25) (    29) (    24)       (    15) (    23) (    28) (    25) (    29) (    24)
       S=0.315  S=0.084  S=0.128  S=0.210  S=0.051  S=0.008        S=0.245  S=0.406  S=0.024  S=0.043  S=0.231  S=0.154

CEOTH  -0.0391   0.3386  99.0000   0.0422   0.4038   0.3458        -0.1659   0.0966  99.0000   0.2529   0.3414   0.4305
       (    15) (    23) (    28) (    25) (    29) (    24)       (    15) (    23) (    28) (    25) (    29) (    24)
       S=0.445  S=0.057  S=*****  S=0.421  S=0.015  S=0.049        S=0.277  S=0.330  S=*****  S=0.111  S=0.035  S=0.018

DRIVE   0.1151   0.4444   0.1432  -0.0919  -0.2211  -0.1419         0.2066   0.3813   0.3025   0.0293   0.0689   0.0297
       (    15) (    23) (    28) (    25) (    29) (    24)       (    15) (    23) (    28) (    25) (    29) (    24)
       S=0.342  S=0.017  S=0.234  S=0.331  S=0.125  S=0.254        S=0.237  S=0.136  S=0.059  S=0.445  S=0.361  S=0.445


        OSP03    OSP06    OSP09    OSP12    OSP15    OSP18          OCR      CCR      OCR      OCR      OCR      OCR

CETOT  -0.1148  -0.2260  -0.2370  -0.0778  -0.1145  -0.0501         0.2156   0.2405   0.2626   0.2725   0.2832   0.3113
       (    26) (    32) (    34) (    35) (    32) (    27)       (    37) (    37) (    37) (    37) (    37) (    37)
       S=0.288  S=0.107  S=0.089  S=0.328  S=0.266  S=0.402        S=0.100  S=0.076  S=0.058  S=0.051  S=0.045  S=0.030

CETCH  -0.1108  -0.2364  -0.2454  -0.1243  -0.1502  -0.0167         0.2057   0.2336   0.2475   0.2406   0.2573   0.2726
       (    26) (    32) (    34) (    35) (    32) (    27)       (    37) (    37) (    37) (    37) (    37) (    37)
       S=0.295  S=0.096  S=0.081  S=0.238  S=0.206  S=0.467        S=0.111  S=0.082  S=0.070  S=0.076  S=0.062  S=0.051

CEBUS  -0.0645   0.1633  -0.0217   0.0605  -0.0089  -0.0717        99.0000   0.0987   0.1524   0.1685   0.1759   0.2430
       (    26) (    32) (    34) (    35) (    32) (    27)       (    37) (    37) (    37) (    37) (    37) (    37)
       S=0.377  S=0.158  S=0.452  S=0.365  S=0.481  S=0.361        S=*****  S=0.281  S=0.184  S=0.159  S=0.149  S=0.074

CEOTH   0.0175  -0.0378  -0.0429   0.1455   0.0158  -0.1167         0.1916  -0.0348   0.1310   0.1667   0.1609   0.1239
       (    26) (    32) (    34) (    35) (    32) (    27)       (    37) (    37) (    37) (    37) (    37) (    37)
       S=0.466  S=0.419  S=0.405  S=0.202  S=0.466  S=0.281        S=0.128  S=0.419  S=0.220  S=0.162  S=0.171  S=0.233

DRIVE   0.3391  -0.1181  -0.2907   0.4198   0.3550   0.3996        -0.1628  -0.1626  -0.1628  -0.1628  -0.1628  -0.1628
       (    26) (    32) (    34) (    35) (    32) (    27)       (    37) (    37) (    37) (    37) (    37) (    37)
       S=0.045  S=0.250  S=0.048  S=0.006  S=0.023  S=0.019        S=0.168  S=0.168  S=0.168  S=0.168  S=0.168  S=0.168


        OCM03    OCM06    OCM09    OCM12    OCM15    OCM18          OCT03    OCT06    OCT09    UCT12    UCT15    UCT18

CETOT   0.0928   0.0269   0.2895   0.1416   0.0740  -0.2665        -0.3857  -0.2502  -0.1790  -0.2733   0.0065   0.0191
       (    25) (    33) (    36) (    37) (    34) (    29)       (    26) (    34) (    37) (    38) (    35) (    29)
       S=0.330  S=0.441  S=0.043  S=0.202  S=0.339  S=0.081        S=0.026  S=0.077  S=0.145  S=0.048  S=0.485  S=0.461

CETCH   0.0984   0.0279   0.3256   0.2337   0.1548  -0.2378        -0.3709  -0.2729  -0.1966  -0.2577   0.0335   0.0766
       (    25) (    33) (    36) (    37) (    34) (    29)       (    26) (    34) (    37) (    38) (    35) (    29)
       S=0.320  S=0.439  S=0.026  S=0.082  S=0.191  S=0.107        S=0.031  S=0.059  S=0.122  S=0.059  S=0.424  S=0.347

CEBUS  -0.1325  -0.0057  -0.1598  -0.1482  -0.0779  -0.1171        -0.1227   0.3245   0.0683  -0.1040   0.0068  -0.1222
       (    25) (    33) (    36) (    37) (    34) (    29)       (    26) (    34) (    37) (    38) (    35) (    29)
       S=0.264  S=0.487  S=0.176  S=0.191  S=0.331  S=0.273        S=0.275  S=0.031  S=0.344  S=0.267  S=0.485  S=0.264

CEOTH   0.0351  -0.0380   0.0355  -0.2056  -0.0899  -0.1864        -0.1329   0.1130  -0.0329  -0.0959  -0.1019   0.0113
       (    25) (    33) (    36) (    37) (    34) (    29)       (    26) (    34) (    37) (    38) (    35) (    29)
       S=0.434  S=0.417  S=0.418  S=0.111  S=0.307  S=0.167        S=0.259  S=0.262  S=0.423  S=0.283  S=0.280  S=0.477

DRIVE  -0.0251   0.0079  -0.3376  -0.0510  -0.1977  -0.2291        -0.0279   0.0921   0.1503  -0.1545  -0.1255  -0.0711
       (    25) (    33) (    36) (    37) (    34) (    29)       (    26) (    34) (    37) (    38) (    35) (    29)
       S=0.453  S=0.483  S=0.022  S=0.382  S=0.131  S=0.116        S=0.446  S=0.302  S=0.187  S=0.177  S=0.236  S=0.357
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CE AND DRIVE vs. OUTCOMES

Total Group - Mid IPR

APPENDIX 9N

```
        OAC03   OAC06   OAC09   OAC12   OAC15   OAC18           ORC03   ORC06   ORC09   ORC12   ORC15   ORC18

CETOT   0.0777  0.0053  0.3279  0.3791  0.4168  0.6221         -0.2172  0.2117  0.0422  0.2647 -0.1569 -0.1740
       (   23) (   25) (   29) (   33) (   21) (   19)         (   23) (   25) (   29) (   33) (   21) (   19)
       S=0.362 S=0.490 S=0.041 S=0.015 S=0.030 S=0.002         S=0.160 S=0.155 S=0.414 S=0.068 S=0.248 S=0.238

CETCH   0.1103 -0.1047  0.2284  0.3299  0.3721  0.6543         -0.2522  0.1894 -0.0457  0.2560 -0.1335 -0.1348
       (   23) (   25) (   29) (   33) (   21) (   19)         (   23) (   25) (   29) (   33) (   21) (   19)
       S=0.308 S=0.309 S=0.117 S=0.030 S=0.048 S=0.001         S=0.123 S=0.182 S=0.407 S=0.075 S=0.282 S=0.291

CEBUS   0.0262  0.1830  0.2596  0.2716  0.2171  0.0364          0.0314  0.1426  0.3909  0.1601 -0.1080 -0.1504
       (   23) (   25) (   29) (   33) (   21) (   19)         (   23) (   25) (   29) (   33) (   21) (   19)
       S=0.453 S=0.191 S=0.087 S=0.063 S=0.172 S=0.441         S=0.443 S=0.248 S=0.018 S=0.187 S=0.321 S=0.269

CEOTH  -0.0704  0.0116  0.2436  0.2827  0.2037  0.0141         -0.0265 -0.0311  0.0991  0.0266 -0.0734 -0.0054
       (   23) (   25) (   29) (   33) (   21) (   19)         (   23) (   25) (   29) (   33) (   21) (   19)
       S=0.375 S=0.478 S=0.101 S=0.055 S=0.188 S=0.477         S=0.452 S=0.441 S=0.305 S=0.442 S=0.376 S=0.491

DRIVE   0.0831  0.2506  0.3672  0.0500  0.0408  0.1338         -0.1143 -0.1191  0.3204  0.0410  0.2452  0.3099
       (   23) (   25) (   29) (   33) (   21) (   19)         (   23) (   25) (   29) (   33) (   21) (   19)
       S=0.353 S=0.113 S=0.025 S=0.391 S=0.430 S=0.293         S=0.302 S=0.285 S=0.045 S=0.410 S=0.142 S=0.098


        OSP03   OSP06   OSP09   OSP12   OSP15   OSP18           OCR     OCR     OCR     OCR     OCR     OCR

CETOT  -0.0545 -0.2787 -0.3097 -0.2259 -0.1488  0.1007          0.2148  0.2806  0.2599  0.3012  0.3302  0.3019
       (   35) (   35) (   36) (   37) (   32) (   23)         (   49) (   49) (   49) (   49) (   49) (   49)
       S=0.295 S=0.052 S=0.033 S=0.089 S=0.208 S=0.324         S=0.069 S=0.025 S=0.036 S=0.018 S=0.010 S=0.018

CETCH  -0.0312 -0.2591 -0.3000 -0.2679 -0.1450  0.0135          0.1863  0.2257  0.2068  0.2358  0.2536  0.2196
       (   35) (   35) (   36) (   37) (   32) (   23)         (   49) (   49) (   49) (   49) (   49) (   49)
       S=0.429 S=0.066 S=0.038 S=0.054 S=0.214 S=0.476         S=0.100 S=0.059 S=0.077 S=0.051 S=0.039 S=0.065

CEBUS  -0.1104 -0.1019 -0.0407  0.1336 -0.0284  0.2731          0.0740  0.1392  0.1702  0.2157  0.2592  0.2489
       (   35) (   35) (   36) (   37) (   32) (   23)         (   49) (   49) (   49) (   49) (   49) (   49)
       S=0.264 S=0.280 S=0.407 S=0.215 S=0.439 S=0.104         S=0.307 S=0.170 S=0.121 S=0.068 S=0.036 S=0.042

CEOTH  -0.1174  0.0040 -0.0920 -0.0152 -0.0397 -0.0314          0.0590  0.0963  0.0953  0.1146  0.1268  0.1220
       (   35) (   35) (   36) (   37) (   32) (   23)         (   49) (   49) (   49) (   49) (   49) (   49)
       S=0.251 S=0.491 S=0.297 S=0.464 S=0.415 S=0.443         S=0.344 S=0.255 S=0.257 S=0.216 S=0.193 S=0.202

DRIVE  -0.0270  0.1322  0.3543  0.1391 -0.0884  0.1418          0.1907  0.1907  0.1907  0.1907  0.1907  0.1907
       (   35) (   35) (   36) (   37) (   32) (   23)         (   49) (   49) (   49) (   49) (   49) (   49)
       S=0.439 S=0.224 S=0.017 S=0.206 S=0.315 S=0.259         S=0.095 S=0.095 S=0.095 S=0.095 S=0.095 S=0.095


        OCM03   OCM06   OCM09   OCM12   OCM15   OCM18           OCT03   OCT06   OCT09   OCT12   OCT15   OCT18

CETOT   0.1734  0.0433 -0.1040 -0.2153 -0.2258 -0.2972          0.0096  0.2027  0.2026 -0.1268 -0.2453  0.0155
       (   38) (   38) (   38) (   39) (   34) (   25)         (   39) (   39) (   38) (   39) (   34) (   25)
       S=0.149 S=0.398 S=0.267 S=0.094 S=0.100 S=0.075         S=0.477 S=0.108 S=0.111 S=0.221 S=0.081 S=0.471

CETCH   0.1207 -0.0145 -0.0221 -0.1513 -0.1342 -0.3522         -0.0634  0.1653  0.1957 -0.0860 -0.2218 -0.0400
       (   38) (   38) (   38) (   39) (   34) (   25)         (   39) (   39) (   38) (   39) (   34) (   25)
       S=0.235 S=0.466 S=0.448 S=0.179 S=0.225 S=0.042         S=0.351 S=0.157 S=0.120 S=0.301 S=0.104 S=0.425

CEBUS   0.0164  0.1187 -0.2396 -0.3849 -0.3491 -0.1361          0.0945  0.0008 -0.1220 -0.1054 -0.1050  0.0815
       (   38) (   38) (   38) (   39) (   34) (   25)         (   39) (   39) (   38) (   39) (   34) (   25)
       S=0.461 S=0.239 S=0.074 S=0.008 S=0.021 S=0.258         S=0.284 S=0.498 S=0.233 S=0.261 S=0.277 S=0.349

CEOTH   0.1988  0.0287 -0.1552 -0.0637 -0.2722  0.0873          0.1729  0.1327  0.1057 -0.3132 -0.1214  0.0542
       (   38) (   38) (   38) (   39) (   34) (   25)         (   39) (   39) (   38) (   39) (   34) (   25)
       S=0.116 S=0.432 S=0.176 S=0.350 S=0.060 S=0.339         S=0.146 S=0.210 S=0.264 S=0.026 S=0.247 S=0.398

DRIVE   0.0997  0.0389 -0.0912  0.2641  0.4888  0.0649         -0.0715  0.0440  0.0349  0.2485  0.1452  0.1437
       (   38) (   38) (   38) (   39) (   34) (   25)         (   39) (   39) (   38) (   39) (   34) (   25)
       S=0.276 S=0.408 S=0.293 S=0.052 S=0.002 S=0.379         S=0.333 S=0.395 S=0.418 S=0.064 S=0.206 S=0.247
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CE AND DRIVE vs. OUTCOMES

Total Group - High IPR

APPENDIX 9 0

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        OAC03   OAC06   OAC09   OAC12   OAC15   OAC18           ORC03   ORC06   ORC09   ORC12   ORC15   ORC18

CETOT -0.2732  0.1146  0.4690  0.5560  0.1195  0.4328          0.5499  0.3886  0.1562  0.2966 -0.0893 -0.0987
      (   16) (   25) (   29) (   39) (   41) (   36)          (   16) (   25) (   29) (   39) (   41) (   36)
      S=0.153 S=0.293 S=0.005 S=0.001 S=0.228 S=0.004          S=0.014 S=0.027 S=0.209 S=0.033 S=0.289 S=0.283

CETCH -0.2840  0.0663  0.4774  0.5564  0.1000  0.2566          0.5509  0.3042  0.1171  0.2838 -0.0552 -0.0347
      (   16) (   25) (   29) (   39) (   41) (   36)          (   16) (   25) (   29) (   39) (   41) (   36)
      S=0.143 S=0.376 S=0.004 S=0.001 S=0.267 S=0.065          S=0.014 S=0.070 S=0.273 S=0.040 S=0.366 S=0.420

CEBUS  0.4761  0.1788  0.0384  0.2887  0.0942  0.3132         -0.0597  0.4206  0.2905  0.3268 -0.0989 -0.1485
      (   16) (   25) (   29) (   39) (   41) (   36)          (   16) (   25) (   29) (   39) (   41) (   36)
      S=0.031 S=0.196 S=0.422 S=0.037 S=0.279 S=0.031          S=0.413 S=0.018 S=0.063 S=0.021 S=0.269 S=0.194

CEOTH  0.2846  0.1862 -0.0245 -0.0058  0.0553  0.3172         -0.1003  0.1809  0.2090 -0.1780 -0.0756 -0.0610
      (   16) (   25) (   29) (   39) (   41) (   36)          (   16) (   25) (   29) (   39) (   41) (   36)
      S=0.143 S=0.186 S=0.450 S=0.486 S=0.366 S=0.030          S=0.356 S=0.193 S=0.138 S=0.139 S=0.319 S=0.362

DRIVE  0.1746  0.2563  0.1449  0.0964 -0.1940  0.1637          0.3345  0.0720  0.2470  0.0073  0.0228  0.0055
      (   15) (   23) (   24) (   32) (   34) (   33)          (   15) (   23) (   24) (   32) (   34) (   33)
      S=0.267 S=0.119 S=0.250 S=0.300 S=0.136 S=0.181          S=0.112 S=0.372 S=0.122 S=0.484 S=0.449 S=0.488


        OSP03   OSP06   OSP09   OSP12   OSP15   OSP18           OCR     OCR     OCR     OCR     OCR     OCR

CETOT -0.2099 -0.2702 -0.2348  0.0495 -0.1291 -0.0345          0.0455  0.0352  0.0511  0.0893  0.1287  0.1606
      (   29) (   36) (   34) (   42) (   45) (   40)          (   37) (   37) (   37) (   37) (   37) (   37)
      S=0.137 S=0.055 S=0.091 S=0.378 S=0.199 S=0.416          S=0.395 S=0.418 S=0.382 S=0.300 S=0.224 S=0.171

CETCH -0.2015 -0.2638 -0.2350  0.0378 -0.1041 -0.0620          0.0479  0.0288  0.0368  0.0525  0.0682  0.0796
      (   29) (   36) (   34) (   42) (   45) (   40)          (   37) (   37) (   37) (   37) (   37) (   37)
      S=0.147 S=0.060 S=0.090 S=0.406 S=0.248 S=0.352          S=0.389 S=0.433 S=0.414 S=0.379 S=0.344 S=0.320

CEBUS -0.0756 -0.0314 -0.0041  0.0576 -0.0802  0.0352         -0.0905  0.0381  0.0421  0.0966  0.1745  0.2345
      (   29) (   36) (   34) (   42) (   45) (   40)          (   37) (   37) (   37) (   37) (   37) (   37)
      S=0.348 S=0.428 S=0.491 S=0.269 S=0.300 S=0.415          S=0.297 S=0.411 S=0.402 S=0.285 S=0.151 S=0.081

CEOTH -0.0821 -0.0997 -0.1118 -0.0839 -0.0640  0.0372          0.1194  0.0525  0.0525  0.2471  0.2076  0.1553
      (   29) (   36) (   34) (   42) (   45) (   40)          (   37) (   37) (   37) (   37) (   37) (   37)
      S=0.336 S=0.281 S=0.264 S=0.299 S=0.338 S=0.410          S=0.241 S=0.379 S=0.379 S=0.070 S=0.109 S=0.179

DRIVE  0.3505 -0.2172 -0.2038  0.2465 -0.0491  0.2648          0.1565  0.1565  0.1565  0.1565  0.1565  0.1565
      (   25) (   31) (   30) (   36) (   38) (   35)          (   34) (   34) (   34) (   34) (   34) (   34)
      S=0.043 S=0.120 S=0.140 S=0.074 S=0.385 S=0.059          S=0.188 S=0.188 S=0.188 S=0.188 S=0.188 S=0.188


        OCM03   OCM06   OCM09   OCM12   OCM15   OCM18           OCT03   OCT06   OCT09   OCT12   OCT15   OCT18

CETOT -0.1417 -0.0388 -0.0990 -0.2075 -0.2196 -0.3341         -0.1620 -0.1385 -0.2424 -0.3011  0.0683  0.0505
      (   30) (   39) (   36) (   44) (   47) (   41)          (   30) (   39) (   36) (   44) (   47) (   41)
      S=0.228 S=0.407 S=0.283 S=0.088 S=0.069 S=0.016          S=0.196 S=0.200 S=0.077 S=0.024 S=0.324 S=0.377

CETCH -0.0788  0.0265 -0.0495 -0.1590 -0.1658 -0.2256         -0.1095 -0.1107 -0.2504 -0.2801  0.0908 -0.0095
      (   30) (   39) (   36) (   44) (   47) (   41)          (   30) (   39) (   36) (   44) (   47) (   41)
      S=0.339 S=0.436 S=0.387 S=0.151 S=0.133 S=0.078          S=0.282 S=0.251 S=0.070 S=0.033 S=0.272 S=0.476

CEBUS -0.3115 -0.3078 -0.2080 -0.2720 -0.1900 -0.2169         -0.2697 -0.2307  0.0165 -0.1669  0.0083  0.1146
      (   30) (   39) (   36) (   44) (   47) (   41)          (   30) (   39) (   36) (   44) (   47) (   41)
      S=0.047 S=0.028 S=0.112 S=0.037 S=0.100 S=0.087          S=0.075 S=0.079 S=0.462 S=0.140 S=0.478 S=0.238

CEOTH  0.0036 -0.1116 -0.0226 -0.1210 -0.0863 -0.2035         -0.0071  0.0950 -0.0926 -0.1357 -0.0601  0.0763
      (   30) (   39) (   36) (   44) (   47) (   41)          (   30) (   39) (   36) (   44) (   47) (   41)
      S=0.492 S=0.249 S=0.448 S=0.217 S=0.282 S=0.101          S=0.485 S=0.283 S=0.296 S=0.190 S=0.344 S=0.318

DRIVE -0.0665 -0.0615 -0.3166 -0.1819 -0.2407 -0.3152          0.0253  0.2339  0.0341 -0.2965 -0.2449 -0.3287
      (   25) (   33) (   31) (   37) (   40) (   37)          (   25) (   33) (   31) (   37) (   40) (   37)
      S=0.375 S=0.367 S=0.041 S=0.141 S=0.067 S=0.029          S=0.452 S=0.095 S=0.428 S=0.037 S=0.064 S=0.024
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CE AND DRIVE vs. OUTCOMES

Total Group - Low IFR

	OAC03	OAC06	OAC09	OAC12	OAC15	OAC18	ORC03	ORC06	ORC09	ORC12	ORC15	ORC18
CETOT	-0.1296 (24) S=0.273	-0.0805 (37) S=0.318	0.2916 (40) S=0.034	0.1499 (38) S=0.188	0.5340 (35) S=0.001	0.5186 (27) S=0.003	0.0418 (24) S=0.423	0.2276 (37) S=0.088	0.3489 (40) S=0.014	0.4014 (38) S=0.006	0.3249 (35) S=0.028	0.1461 (27) S=0.234
CETCH	-0.1545 (24) S=0.235	-0.1749 (37) S=0.150	0.1904 (40) S=0.120	0.1389 (38) S=0.203	0.4683 (35) S=0.002	0.5128 (27) S=0.003	-0.0674 (24) S=0.377	0.2825 (37) S=0.045	0.3772 (40) S=0.008	0.4101 (38) S=0.005	0.2811 (35) S=0.051	0.1415 (27) S=0.241
CEBUS	0.0072 (24) S=0.487	0.1496 (37) S=0.188	0.1756 (40) S=0.134	0.0562 (38) S=0.369	0.3313 (35) S=0.026	0.4217 (27) S=0.014	0.1101 (24) S=0.304	-0.0707 (37) S=0.339	-0.1680 (40) S=0.150	0.0523 (38) S=0.377	0.1537 (35) S=0.189	0.1549 (27) S=0.220
CEOTH	0.0116 (24) S=0.479	0.0478 (37) S=0.389	0.2549 (40) S=0.056	0.0858 (38) S=0.304	0.3407 (35) S=0.023	-0.0675 (27) S=0.369	0.1161 (24) S=0.295	-0.0000 (37) S=0.500	0.0238 (40) S=0.442	0.0577 (38) S=0.365	0.2725 (35) S=0.057	-0.0514 (27) S=0.399
DRIVE	-0.2530 (23) S=0.122	0.0794 (35) S=0.323	0.0505 (36) S=0.385	0.1339 (33) S=0.229	-0.1183 (30) S=0.267	0.0795 (23) S=0.359	-0.1603 (23) S=0.233	0.1093 (36) S=0.263	-0.0976 (36) S=0.286	-0.2225 (33) S=0.107	-0.0931 (30) S=0.312	-0.0570 (23) S=0.398

	OSP03	OSP06	OSP09	OSP12	OSP15	OSP18	OCR	OCR	OCR	OCR	OCR	OCR
CETOT	-0.1222 (43) S=0.218	-0.1458 (50) S=0.150	-0.0372 (51) S=0.398	-0.0005 (52) S=0.499	-0.0186 (46) S=0.481	0.2565 (32) S=0.078	0.1400 (51) S=0.164	0.1553 (51) S=0.138	0.1750 (51) S=0.110	0.2220 (51) S=0.059	0.2416 (51) S=0.044	0.2128 (51) S=0.067
CETCH	-0.0566 (43) S=0.269	-0.1901 (50) S=0.093	-0.0219 (51) S=0.439	0.0016 (52) S=0.495	-0.0075 (46) S=0.480	0.2648 (32) S=0.072	0.1066 (51) S=0.228	0.1233 (51) S=0.194	0.1216 (51) S=0.198	0.1649 (51) S=0.124	0.1553 (51) S=0.138	0.1248 (51) S=0.192
CEBUS	-0.0544 (43) S=0.364	0.1158 (50) S=0.204	-0.0608 (51) S=0.336	-0.0108 (52) S=0.470	-0.0518 (46) S=0.366	0.1890 (32) S=0.150	0.1398 (51) S=0.164	0.1332 (51) S=0.176	0.1934 (51) S=0.087	0.2397 (51) S=0.045	0.2834 (51) S=0.022	0.2636 (51) S=0.031
CEOTH	-0.0557 (43) S=0.361	-0.0022 (50) S=0.494	-0.0351 (51) S=0.404	-0.0030 (52) S=0.492	-0.0132 (46) S=0.465	-0.0305 (32) S=0.434	-0.0215 (51) S=0.440	0.0020 (51) S=0.495	0.0408 (51) S=0.388	0.0630 (51) S=0.330	0.1255 (51) S=0.190	0.1153 (51) S=0.210
DRIVE	0.0013 (37) S=0.497	0.1714 (44) S=0.133	0.1449 (44) S=0.174	0.1545 (44) S=0.158	0.1625 (38) S=0.165	-0.0445 (26) S=0.415	0.1481 (44) S=0.169	0.1481 (44) S=0.169	0.1481 (44) S=0.169	0.1481 (44) S=0.169	0.1481 (44) S=0.169	0.1481 (44) S=0.169

	OCM03	UCM06	OCM09	OCM12	UCM15	OCM18	OCT03	OCT06	OCT09	OCT12	OCT15	UCT18
CETOT	0.2908 (45) S=0.026	0.1329 (56) S=0.164	0.0164 (54) S=0.453	-0.0608 (55) S=0.330	-0.0697 (48) S=0.319	-0.1568 (33) S=0.192	-0.0836 (45) S=0.293	0.1271 (56) S=0.175	0.1079 (54) S=0.219	0.0805 (55) S=0.279	-0.1189 (48) S=0.210	0.0813 (33) S=0.326
CETCH	0.2014 (45) S=0.092	0.0853 (56) S=0.266	0.0857 (54) S=0.269	0.0002 (55) S=0.499	-0.0133 (48) S=0.464	-0.2155 (33) S=0.114	-0.1687 (45) S=0.134	0.0841 (56) S=0.269	0.0922 (54) S=0.254	0.0749 (55) S=0.293	-0.0948 (48) S=0.261	0.1083 (33) S=0.274
CEBUS	0.1675 (45) S=0.136	0.1544 (56) S=0.128	-0.1897 (54) S=0.085	-0.3260 (55) S=0.008	-0.2125 (48) S=0.073	-0.0222 (33) S=0.451	0.1634 (45) S=0.142	0.0440 (56) S=0.374	0.0048 (54) S=0.486	0.0915 (55) S=0.253	-0.0956 (48) S=0.259	-0.0359 (33) S=0.421
CECTH	0.2197 (45) S=0.074	0.0026 (56) S=0.492	-0.1189 (54) S=0.196	-0.0905 (55) S=0.256	-0.1068 (48) S=0.235	0.0961 (33) S=0.297	0.1912 (45) S=0.104	0.0939 (56) S=0.246	0.0682 (54) S=0.312	-0.0623 (55) S=0.326	-0.0933 (48) S=0.264	0.0075 (33) S=0.484
DRIVE	-0.2692 (39) S=0.049	-0.0321 (50) S=0.412	-0.0505 (47) S=0.368	-0.2071 (47) S=0.081	0.0077 (40) S=0.481	-0.2463 (27) S=0.108	0.0014 (39) S=0.497	-0.1727 (50) S=0.115	-0.0890 (47) S=0.276	-0.1160 (47) S=0.219	-0.1700 (40) S=0.147	-0.2213 (27) S=0.134

CE AND DRIVE vs. OUTCOMES

Total Group - Mid IFR

	OAC03	OAC06	OAC09	OAC12	OAC15	OAC18	ORC03	ORC06	ORC09	ORC12	ORC15	ORC18
CETOT	0.0037 (20) S=0.494	0.4492 (21) S=0.021	0.3026 (33) S=0.043	0.5331 (30) S=0.001	0.3350 (20) S=0.074	0.1690 (14) S=0.282	-0.0562 (20) S=0.407	0.4224 (21) S=0.028	0.2590 (33) S=0.073	0.3446 (30) S=0.031	0.3554 (20) S=0.062	-0.0555 (14) S=0.425
CETCH	0.0189 (20) S=0.468	0.2677 (21) S=0.120	0.2817 (33) S=0.056	0.5081 (30) S=0.002	0.2942 (20) S=0.104	0.2071 (14) S=0.239	-0.0129 (20) S=0.479	0.3927 (21) S=0.039	0.2692 (33) S=0.065	0.3433 (30) S=0.032	0.2728 (20) S=0.122	-0.0703 (14) S=0.406
CEBUS	0.0432 (20) S=0.428	0.5051 (21) S=0.010	0.1978 (33) S=0.135	0.3661 (30) S=0.023	0.1335 (20) S=0.287	-0.0383 (14) S=0.448	-0.0710 (20) S=0.383	0.1664 (21) S=0.235	-0.0024 (33) S=0.495	0.2132 (30) S=0.129	0.2911 (20) S=0.107	0.0149 (14) S=0.480
CEOTH	-0.2236 (20) S=0.172	0.4063 (21) S=0.034	0.0697 (33) S=0.350	0.1989 (30) S=0.146	-0.0021 (20) S=0.496	-0.2233 (14) S=0.221	-0.2809 (20) S=0.115	-0.2368 (21) S=0.151	-0.2033 (33) S=0.128	-0.0349 (30) S=0.427	-0.1219 (20) S=0.304	0.0880 (14) S=0.382
DRIVE	0.3113 (17) S=0.113	0.3640 (16) S=0.083	0.4223 (24) S=0.020	-0.2493 (22) S=0.132	-0.2585 (16) S=0.167	-0.3086 (13) S=0.153	0.2691 (17) S=0.148	0.0877 (16) S=0.373	0.3726 (24) S=0.036	-0.0924 (22) S=0.341	-0.4018 (16) S=0.061	-0.2890 (13) S=0.169

	OSP03	OSP06	OSP09	OSP12	OSP15	OSP18	OCR	OCR	OCR	OCR	OCR	OCR
CETOT	-0.2021 (32) S=0.134	-0.2042 (34) S=0.123	-0.1210 (34) S=0.248	-0.2440 (33) S=0.086	-0.1011 (26) S=0.312	0.0594 (18) S=0.407	0.3277 (45) S=0.014	0.3476 (45) S=0.010	0.3179 (45) S=0.017	0.3468 (45) S=0.010	0.3514 (45) S=0.009	0.3435 (45) S=0.010
CETCH	-0.1729 (32) S=0.172	-0.1912 (34) S=0.139	-0.1533 (34) S=0.193	-0.2673 (33) S=0.066	-0.2176 (26) S=0.143	-0.1391 (18) S=0.291	0.1998 (45) S=0.094	0.2489 (45) S=0.050	0.1841 (45) S=0.113	0.1936 (45) S=0.101	0.2281 (45) S=0.066	0.2203 (45) S=0.073
CEBUS	-0.0669 (32) S=0.358	-0.0368 (34) S=0.418	0.3486 (34) S=0.022	0.0057 (33) S=0.487	0.1939 (26) S=0.171	0.2825 (18) S=0.128	0.3017 (45) S=0.022	0.2719 (45) S=0.035	0.3369 (45) S=0.012	0.3525 (45) S=0.009	0.3424 (45) S=0.011	0.3527 (45) S=0.009
CEOTH	-0.0966 (32) S=0.299	-0.0638 (34) S=0.360	-0.1088 (34) S=0.270	-0.0880 (33) S=0.313	0.0013 (26) S=0.498	-0.0059 (18) S=0.491	0.1850 (45) S=0.112	0.1856 (45) S=0.111	0.1500 (45) S=0.163	0.1182 (45) S=0.220	0.0504 (45) S=0.371	0.0190 (45) S=0.451
DRIVE	0.2951 (25) S=0.076	0.2730 (26) S=0.089	0.3193 (26) S=0.056	0.2558 (25) S=0.108	-0.0591 (20) S=0.402	-0.0557 (15) S=0.419	0.1698 (40) S=0.147	0.1698 (40) S=0.147	0.1698 (40) S=0.147	0.1698 (40) S=0.147	0.1698 (40) S=0.147	0.1698 (40) S=0.147

	OCM03	OCM06	OCM09	OCM12	OCM15	OCM18	OCT03	OCT06	OCT09	OCT12	OCT15	OCT18
CETOT	0.1143 (33) S=0.263	0.0204 (34) S=0.454	0.0814 (35) S=0.321	0.0111 (34) S=0.475	-0.0157 (26) S=0.470	-0.1868 (19) S=0.222	-0.1497 (35) S=0.195	-0.1802 (36) S=0.146	-0.1625 (36) S=0.172	-0.2996 (35) S=0.040	-0.1386 (27) S=0.245	-0.2718 (19) S=0.130
CETCH	0.0891 (33) S=0.311	-0.0125 (34) S=0.472	0.1089 (35) S=0.267	0.0840 (34) S=0.318	0.0935 (26) S=0.325	-0.1385 (19) S=0.286	-0.0877 (35) S=0.308	-0.2453 (36) S=0.075	-0.1426 (36) S=0.203	-0.3071 (35) S=0.036	-0.1719 (27) S=0.196	-0.3752 (19) S=0.057
CEBUS	0.0308 (33) S=0.432	0.0544 (34) S=0.380	-0.2264 (35) S=0.095	-0.2073 (34) S=0.120	-0.1859 (26) S=0.182	-0.0971 (19) S=0.346	-0.2500 (35) S=0.074	0.1468 (36) S=0.196	-0.1711 (36) S=0.159	-0.1281 (35) S=0.232	0.0483 (27) S=0.405	-0.0140 (19) S=0.477
CEOTH	0.1690 (33) S=0.174	0.2723 (34) S=0.060	-0.0587 (35) S=0.369	0.1193 (34) S=0.251	-0.1421 (26) S=0.244	-0.2206 (19) S=0.182	-0.0079 (35) S=0.482	0.3539 (36) S=0.017	-0.0452 (36) S=0.397	0.3694 (35) S=0.014	-0.1298 (27) S=0.259	0.3775 (19) S=0.056
DRIVE	-0.0890 (25) S=0.336	0.07[illegible] (25) S=0.370	0.0152 (25) S=0.471	-0.0443 (25) S=0.417	0.1939 (20) S=0.206	0.1567 (17) S=0.261	-0.2725 (27) S=0.085	0.1256 (27) S=0.256	0.0017 (27) S=0.497	0.2529 (26) S=0.106	0.1986 (21) S=0.194	0.3759 (17) S=0.068

CE AND DRIVE vs. OUTCOMES

Total Group - High IFR

```
        OAC03     OAC06     OAC09     OAC12     OAC15     OAC18        ORC03     ORC06     ORC09     ORC12     ORC15     ORC18

CETOT  -0.0489    0.1623    0.3230    0.2824    0.1756    0.3961      -0.0724   -0.1299    0.0556    0.1054   -0.0891   -0.0797
       (   39)   (   60)   (   67)   (   70)   (   62)   (   57)     (   39)   (   60)   (   67)   (   70)   (   62)   (   57)
       S=0.384   S=0.108   S=0.004   S=0.009   S=0.086   S=0.001     S=0.331   S=0.161   S=0.327   S=0.193   S=0.246   S=0.278

CETCH  -0.0457    0.0514    0.3292    0.2989    0.1369    0.2270      -0.0106   -0.1597    0.0909    0.1229   -0.0771   -0.0571
       (   39)   (   60)   (   67)   (   70)   (   62)   (   57)     (   39)   (   60)   (   67)   (   70)   (   62)   (   57)
       S=0.391   S=0.348   S=0.003   S=0.006   S=0.144   S=0.045     S=0.475   S=0.111   S=0.232   S=0.155   S=0.276   S=0.337

CEBUS  -0.0435    0.3192    0.2564   -0.0440    0.1352    0.4213      -0.0104    0.1362   -0.0679   -0.0501   -0.0626   -0.0389
       (   39)   (   60)   (   67)   (   70)   (   62)   (   57)     (   39)   (   60)   (   67)   (   70)   (   62)   (   57)
       S=0.395   S=0.006   S=0.018   S=0.359   S=0.147   S=0.001     S=0.475   S=0.150   S=0.292   S=0.340   S=0.314   S=0.393

CEOTH   0.0328    0.2770   -0.0816    0.0888    0.1297    0.1446      -0.2924   -0.0051   -0.0823    0.0251   -0.0579   -0.0594
       (   39)   (   60)   (   67)   (   70)   (   62)   (   57)     (   39)   (   60)   (   67)   (   70)   (   62)   (   57)
       S=0.421   S=0.016   S=0.256   S=0.232   S=0.158   S=0.142     S=0.035   S=0.484   S=0.254   S=0.418   S=0.327   S=0.330

DRIVE   0.1219    0.2802    0.3068   -0.0136    0.0979    0.3360       0.2305    0.3602    0.2394   -0.0451    0.0301   -0.0018
       (   34)   (   50)   (   50)   (   51)   (   49)   (   44)     (   34)   (   50)   (   50)   (   51)   (   49)   (   44)
       S=0.246   S=0.024   S=0.015   S=0.462   S=0.252   S=0.013     S=0.095   S=0.005   S=0.047   S=0.377   S=0.419   S=0.495
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```
        OSP03     OSP06     OSP09     OSP12     OSP15     OSP18

CETOT  -0.0952   -0.1714   -0.0705   -0.0549   -0.0810   -0.0031
       (   71)   (   92)   (   92)   (   90)   (   93)   (   81)
       S=0.215   S=0.051   S=0.252   S=0.304   S=0.220   S=0.489

CETCH  -0.0835   -0.1544   -0.0864   -0.0969   -0.0758   -0.0619
       (   71)   (   92)   (   92)   (   90)   (   93)   (   81)
       S=0.244   S=0.071   S=0.206   S=0.182   S=0.232   S=0.291

CEBUS  -0.0542   -0.0724    0.1766    0.2179   -0.0150    0.1302
       (   71)   (   92)   (   92)   (   90)   (   93)   (   81)
       S=0.327   S=0.246   S=0.046   S=0.020   S=0.440   S=0.123

CEOTH  -0.0805   -0.0947   -0.0725   -0.0794   -0.0507   -0.0080
       (   71)   (   92)   (   92)   (   90)   (   93)   (   81)
       S=0.252   S=0.185   S=0.245   S=0.229   S=0.315   S=0.472

DRIVE   0.0895   -0.0406    0.1366    0.3265    0.0662    0.2756
       (   52)   (   69)   (   66)   (   63)   (   66)   (   58)
       S=0.264   S=0.370   S=0.137   S=0.005   S=0.299   S=0.018
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        OCM03     OCM06     OCM09     OCM12     OCM15     OCM18     OCT03     OCT06     OCT09     OCT12     OCT15     OCT18

CETOT   0.0987    0.0820   -0.2162   -0.0246   -0.1299   -0.1828    0.0182    0.0419    0.0893    0.0169    0.0381    0.1186
       (   77)   (  100)   (   97)   (   94)   (   97)   (   82)   (   78)   (  101)   (   97)   (   94)   (   97)   (   82)
       S=0.196   S=0.209   S=0.017   S=0.407   S=0.102   S=0.050   S=0.437   S=0.339   S=0.192   S=0.436   S=0.356   S=0.144

CETCH   0.0814    0.0855   -0.1941   -0.0111   -0.0775   -0.1008   -0.0071    0.0055    0.0897   -0.0103    0.0933    0.1202
       (   77)   (  100)   (   97)   (   94)   (   97)   (   82)   (   78)   (  101)   (   97)   (   94)   (   97)   (   82)
       S=0.241   S=0.199   S=0.028   S=0.458   S=0.225   S=0.184   S=0.475   S=0.478   S=0.216   S=0.461   S=0.182   S=0.141

CEBUS   0.0642   -0.1625   -0.2158   -0.1837   -0.2020   -0.2257    0.1827    0.0566    0.0980   -0.0272   -0.1369    0.0075
       (   77)   (  100)   (   97)   (   94)   (   97)   (   82)   (   78)   (  101)   (   97)   (   94)   (   97)   (   82)
       S=0.290   S=0.053   S=0.017   S=0.038   S=0.024   S=0.021   S=0.055   S=0.287   S=0.170   S=0.397   S=0.091   S=0.473

CEOTH   0.1370    0.1012   -0.0205    0.1571   -0.0248   -0.0442    0.1060    0.1257    0.0002    0.2054   -0.0265    0.0585
       (   77)   (  100)   (   97)   (   94)   (   97)   (   82)   (   78)   (  101)   (   97)   (   94)   (   97)   (   82)
       S=0.117   S=0.158   S=0.421   S=0.065   S=0.405   S=0.347   S=0.178   S=0.103   S=0.499   S=0.024   S=0.398   S=0.301

DRIVE   0.1762    0.1560   -0.1128   -0.2383   -0.1255   -0.2575   -0.0696   -0.0071   -0.1572   -0.1093   -0.2686    0.0993
       (   57)   (   74)   (   70)   (   65)   (   70)   (   59)   (   58)   (   75)   (   70)   (   65)   (   70)   (   59)
       S=0.095   S=0.092   S=0.176   S=0.028   S=0.150   S=0.024   S=0.302   S=0.476   S=0.097   S=0.193   S=0.012   S=0.227
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APPENDIX 9 R

CE AND DRIVE vs. OUTCOMES

Total Group - Low OCR

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          OAC03     OAC06     OAC09     OAC12     OAC15     OAC18     ORC03     ORC05     ORC09     ORC12     ORC15     ORC18
        0.0172    0.1465    0.4114    0.3485    0.3408    0.3911    0.6372   -0.1020    0.1528    0.3855    0.1914    0.0697
CETOT   (    14)  (    13)  (    19)  (    20)  (    23)  (    17)  (    14)  (    13)  (    19)  (    20)  (    23)  (    17)
        S=0.477   S=0.317   S=0.040   S=0.068   S=0.056   S=0.060   S=0.007   S=0.370   S=0.266   S=0.047   S=0.191   S=0.395

        0.1589    0.1952    0.2453    0.3253    0.3397    0.1936    0.4583   -0.0997   -0.0555    0.4273    0.1949    0.0743
CETCH   (    14)  (    13)  (    19)  (    20)  (    23)  (    17)  (    14)  (    13)  (    19)  (    20)  (    23)  (    17)
        S=0.282   S=0.261   S=0.155   S=0.081   S=0.056   S=0.228   S=0.050   S=0.373   S=0.411   S=0.030   S=0.186   S=0.388

        0.0522    0.5989    0.6103    0.2412    0.2686    0.4640   -0.2980   -0.2769    0.3115   -0.1179    0.0650   -0.0844
CEBUS   (    14)  (    13)  (    19)  (    20)  (    23)  (    17)  (    14)  (    13)  (    19)  (    20)  (    23)  (    17)
        S=0.430   S=0.015   S=0.003   S=0.153   S=0.108   S=0.030   S=0.150   S=0.180   S=0.097   S=0.310   S=0.384   S=0.403

       -0.1392   -0.0091    0.3200   99.0000    0.0438    0.3390    0.4211   -0.0363    0.2321   99.0000    0.0763    0.3000
CEOTH   (    14)  (    13)  (    19)  (    20)  (    23)  (    17)  (    14)  (    13)  (    19)  (    20)  (    23)  (    17)
        S=0.318   S=0.488   S=0.091   S=*****   S=0.421   S=0.092   S=0.067   S=0.453   S=0.169   S=*****   S=0.365   S=0.121

        0.0274    0.2630    0.0093    0.1331   -0.0692   -0.0042   -0.4287   -0.0194    0.2479   -0.1319   -0.2309    0.0920
DRIVE   (    12)  (    10)  (    15)  (    17)  (    19)  (    15)  (    12)  (    10)  (    16)  (    17)  (    19)  (    15)
        S=0.466   S=0.231   S=0.486   S=0.305   S=0.389   S=0.494   S=0.082   S=0.479   S=0.177   S=0.307   S=0.171   S=0.372


          OSP03     OSP06     OSP09     OSP12     OSP15     OSP18
       -0.1385   -0.2271   -0.0906   -0.0858   -0.1284   -0.0729
CETOT   (    25)  (    27)  (    27)  (    31)  (    28)  (    22)
        S=0.255   S=0.127   S=0.327   S=0.323   S=0.257   S=0.374

       -0.1199   -0.2277   -0.1489   -0.1392   -0.1949   -0.1553
CETCH   (    25)  (    27)  (    27)  (    31)  (    28)  (    22)
        S=0.284   S=0.127   S=0.231   S=0.228   S=0.160   S=0.245

       -0.0815   -0.0319    0.1647    0.0459    0.0536    0.0460
CEBUS   (    25)  (    27)  (    27)  (    31)  (    28)  (    22)
        S=0.349   S=0.437   S=0.206   S=0.403   S=0.393   S=0.419

       -0.0527   -0.0631   -0.0702    0.0314   -0.0326   -0.0634
CEOTH   (    25)  (    27)  (    27)  (    31)  (    28)  (    22)
        S=0.405   S=0.377   S=0.364   S=0.433   S=0.435   S=0.390

        0.2845    0.1259    0.2518   -0.0589    0.0800    0.0186
DRIVE   (    20)  (    21)  (    22)  (    26)  (    24)  (    20)
        S=0.112   S=0.293   S=0.129   S=0.388   S=0.355   S=0.469


          OCM03     OCM06     OCM09     OCM12     OCM15     OCM18     OCT03     OCT06     OCT09     OCT12     OCT15     OCT18
        0.2619    0.1579   -0.2525   -0.0753   -0.1841   -0.1326    0.0573    0.1167    0.1330   -0.0651    0.0029   -0.0511
CETOT   (    27)  (    32)  (    31)  (    35)  (    31)  (    24)  (    27)  (    32)  (    31)  (    35)  (    31)  (    24)
        S=0.093   S=0.179   S=0.085   S=0.334   S=0.161   S=0.268   S=0.389   S=0.262   S=0.238   S=0.355   S=0.494   S=0.406

        0.1676    0.2371   -0.1178   -0.0528   -0.2247   -0.0561   -0.0434    0.0014    0.0219   -0.0967   -0.0903   -0.0822
CETCH   (    27)  (    32)  (    31)  (    35)  (    31)  (    24)  (    27)  (    32)  (    31)  (    35)  (    31)  (    24)
        S=0.202   S=0.096   S=0.264   S=0.382   S=0.112   S=0.397   S=0.415   S=0.497   S=0.453   S=0.290   S=0.314   S=0.351

       -0.0180   -0.0990   -0.3223   -0.0936   -0.0186   -0.2036    0.0882    0.3946    0.2428   -0.0338    0.1172   -0.0248
CEBUS   (    27)  (    32)  (    31)  (    35)  (    31)  (    24)  (    27)  (    32)  (    31)  (    35)  (    31)  (    24)
        S=0.464   S=0.295   S=0.038   S=0.296   S=0.460   S=0.170   S=0.331   S=0.013   S=0.094   S=0.424   S=0.265   S=0.454

        0.2404   -0.0234   -0.1485    0.2606   -0.0003    0.1204    0.2297    0.1148    0.0881    0.3955    0.1051    0.0941
CEOTH   (    27)  (    32)  (    31)  (    35)  (    31)  (    24)  (    27)  (    32)  (    31)  (    35)  (    31)  (    24)
        S=0.114   S=0.449   S=0.213   S=0.065   S=0.499   S=0.288   S=0.125   S=0.266   S=0.319   S=0.009   S=0.287   S=0.331

       -0.5971   -0.2714   -0.3649    0.0776   -0.1723   -0.2045    0.0839    0.1648    0.1969    0.0079   -0.1191   -0.0775
DRIVE   (    22)  (    25)  (    26)  (    30)  (    27)  (    22)  (    22)  (    26)  (    26)  (    30)  (    27)  (    22)
        S=0.002   S=0.090   S=0.033   S=0.342   S=0.195   S=0.181   S=0.355   S=0.210   S=0.169   S=0.484   S=0.277   S=0.366
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APPENDIX 9 S

<u>CE AND DRIVE vs. OUTCOMES</u>

Total Group - Mid OCR

```
       OAC03      OAC06      OAC09      OAC12      OAC15      OAC18      ORC03      ORC06      ORC09      ORC12      ORC15      ORC18
         -0.0267     0.2109     0.1546     0.3379     0.5693     0.3288     0.2722     0.2530     0.0369     0.0092     0.2350     0.1091
CETOT  (     14)  (     20)  (     19)  (     22)  (     28)  (     25)  (     14)  (     20)  (     19)  (     22)  (     28)  (     25)
       S=0.464    S=0.196    S=0.264    S=0.062    S=0.001    S=0.054    S=0.173    S=0.141    S=0.440    S=0.484    S=0.114    S=0.302

         -0.3277    -0.0862     0.1275     0.3270     0.4482     0.2173     0.1538     0.1910     0.0231    -0.0484     0.1351     0.0487
CETCH  (     14)  (     20)  (     19)  (     22)  (     28)  (     25)  (     14)  (     20)  (     19)  (     22)  (     28)  (     25)
       S=0.126    S=0.359    S=0.301    S=0.069    S=0.008    S=0.148    S=0.288    S=0.210    S=0.463    S=0.413    S=0.247    S=0.409

          0.1890     0.4529     0.1881     0.1634     0.4912     0.4586     0.1555     0.0985     0.1059     0.2431     0.2271     0.1434
CEBUS  (     14)  (     20)  (     19)  (     22)  (     28)  (     25)  (     14)  (     20)  (     19)  (     22)  (     28)  (     25)
       S=0.259    S=0.022    S=0.220    S=0.234    S=0.004    S=0.011    S=0.298    S=0.340    S=0.332    S=0.138    S=0.123    S=0.247

          0.3637     0.6386    -0.0595     0.1257     0.3976    -0.1471     0.0197     0.2654    -0.1836     0.0401     0.2769     0.3712
CEOTH  (     14)  (     20)  (     19)  (     22)  (     28)  (     25)  (     14)  (     20)  (     19)  (     22)  (     28)  (     25)
       S=0.101    S=0.001    S=0.404    S=0.289    S=0.018    S=0.241    S=0.473    S=0.129    S=0.226    S=0.430    S=0.077    S=0.034

          0.0529     0.2520     0.2845     0.4182    -0.3712    -0.1975     0.1186     0.3852     0.2828     0.2090     0.2122     0.0807
DRIVE  (     14)  (     19)  (     17)  (     20)  (     24)  (     24)  (     14)  (     19)  (     17)  (     20)  (     24)  (     24)
       S=0.429    S=0.149    S=0.134    S=0.033    S=0.037    S=0.177    S=0.343    S=0.052    S=0.136    S=0.188    S=0.160    S=0.499


       OSP03      OSP06      OSP09      OSP12      OSP15      OSP18
         -0.3199    -0.4107    -0.3109    -0.0427     0.0710     0.2683
CETOT  (     22)  (     24)  (     24)  (     33)  (     34)  (     29)
       S=0.073    S=0.023    S=0.070    S=0.407    S=0.345    S=0.080

         -0.1598    -0.3847    -0.3227    -0.0937     0.0832     0.1982
CETCH  (     22)  (     24)  (     24)  (     33)  (     34)  (     29)
       S=0.239    S=0.032    S=0.062    S=0.302    S=0.320    S=0.151

         -0.2432    -0.0716    -0.0229     0.1354     0.0347     0.1988
CEBUS  (     22)  (     24)  (     24)  (     33)  (     34)  (     29)
       S=0.138    S=0.370    S=0.458    S=0.226    S=0.423    S=0.151

         -0.1233     0.0943    -0.0273     0.0924    -0.0133     0.2988
CEOTH  (     22)  (     24)  (     24)  (     33)  (     34)  (     29)
       S=0.292    S=0.331    S=0.450    S=0.305    S=0.470    S=0.058

          0.3775    -0.2685    -0.3555    -0.0330    -0.0648    -0.1247
DRIVE  (     21)  (     23)  (     23)  (     31)  (     30)  (     27)
       S=0.046    S=0.108    S=0.048    S=0.430    S=0.367    S=0.268


       OCM03      OCM06      OCM09      OCM12      OCM15      OCM18      OCT03      OCT06      OCT09      OCT12      OCT15      OCT18
          0.1355     0.2909     0.1939     0.0122    -0.2348    -0.2267    -0.2227     0.0546     0.0492    -0.0917    -0.0484     0.0696
CETOT  (     23)  (     26)  (     24)  (     33)  (     34)  (     29)  (     23)  (     26)  (     24)  (     33)  (     34)  (     29)
       S=0.269    S=0.075    S=0.182    S=0.473    S=0.091    S=0.118    S=0.154    S=0.395    S=0.410    S=0.306    S=0.393    S=0.360

         -0.0291     0.1479     0.2458     0.1196    -0.1857    -0.1965    -0.2345    -0.0342     0.0833    -0.0309     0.0066     0.0975
CETCH  (     23)  (     26)  (     24)  (     33)  (     34)  (     29)  (     23)  (     25)  (     24)  (     33)  (     34)  (     29)
       S=0.448    S=0.235    S=0.124    S=0.254    S=0.146    S=0.153    S=0.141    S=0.434    S=0.349    S=0.432    S=0.455    S=0.307

          0.2495     0.2633    -0.2709    -0.3692    -0.3088    -0.1082     0.0446     0.1126    -0.1858    -0.2142    -0.1215    -0.0353
CEBUS  (     23)  (     26)  (     24)  (     33)  (     34)  (     29)  (     23)  (     26)  (     24)  (     33)  (     34)  (     29)
       S=0.125    S=0.097    S=0.100    S=0.017    S=0.038    S=0.288    S=0.420    S=0.292    S=0.192    S=0.116    S=0.247    S=0.428

          0.1669     0.1890     0.0348    -0.0814    -0.0279    -0.0287    -0.1288     0.4729    -0.0103    -0.1161    -0.0866    -0.3113
CEOTH  (     23)  (     26)  (     24)  (     33)  (     34)  (     29)  (     23)  (     26)  (     24)  (     33)  (     34)  (     29)
       S=0.223    S=0.178    S=0.436    S=0.326    S=0.438    S=0.441    S=0.279    S=0.007    S=0.491    S=0.260    S=0.313    S=0.050

         -0.2195    -0.0043    -0.2918     0.1036     0.1886    -0.1799     0.1940     0.1143    -0.0545    -0.3379    -0.0663    -0.2741
DRIVE  (     21)  (     24)  (     22)  (     30)  (     30)  (     27)  (     21)  (     24)  (     22)  (     30)  (     30)  (     27)
       S=0.169    S=0.492    S=0.094    S=0.293    S=0.159    S=0.185    S=0.200    S=0.297    S=0.405    S=0.034    S=0.364    S=0.083
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CE AND DRIVE vs. OUTCOMES

Total Group - High OCR

APPENDIX 9U

	Before TEMPLY						After TEMPLY					
	OCR 3	OCR 6	OCR 9	OCR 12	OCR 15	OCR 18	OCR 3	OCR 6	OCR 9	OCR 12	OCR 15	OCR 18
CETOT	0.0375 (17) S=0.443	0.0232 (17) S=0.465	0.0708 (17) S=0.394	0.1180 (17) S=0.326	0.2206 (17) S=0.197	0.2688 (17) S=0.148	-0.0454 (38) S=0.393	0.0974 (38) S=0.280	0.0429 (38) S=0.399	0.0936 (38) S=0.288	0.0264 (38) S=0.437	0.0112 (38) S=0.473
CETCH	-0.0634 (17) S=0.404	-0.0384 (17) S=0.442	-0.0048 (17) S=0.493	0.0474 (17) S=0.428	0.1772 (17) S=0.248	0.1932 (17) S=0.229	-0.0456 (38) S=0.393	0.1398 (38) S=0.201	0.0887 (38) S=0.298	0.1209 (38) S=0.235	0.1075 (38) S=0.260	0.0820 (38) S=0.312
CEBUS	0.1707 (17) S=0.256	0.1199 (17) S=0.323	0.1359 (17) S=0.301	0.1357 (17) S=0.302	0.1354 (17) S=0.302	0.2426 (17) S=0.174	-0.0700 (38) S=0.338	-0.2575 (38) S=0.059	0.0577 (38) S=0.365	0.1086 (38) S=0.258	-0.0360 (38) S=0.415	-0.0125 (38) S=0.470
CEOTH	-0.5049 (17) S=0.019	-0.6025 (17) S=0.005	-0.6025 (17) S=0.005	-0.1267 (17) S=0.314	-0.0239 (17) S=0.464	-0.0493 (17) S=0.425	0.2190 (38) S=0.093	-0.2891 (38) S=0.039	-0.3193 (38) S=0.025	-0.3009 (38) S=0.033	-0.2912 (38) S=0.038	-0.3199 (38) S=0.025
DRIVE	0.4519 (17) S=0.034	0.4519 (17) S=0.034	0.4519 (17) S=0.034	0.4519 (17) S=0.034	0.4519 (17) S=0.034	0.4519 (17) S=0.034	0.0577 (38) S=0.365	0.0577 (38) S=0.365	0.0577 (38) S=0.365	0.0577 (38) S=0.365	0.0577 (38) S=0.365	0.0577 (38) S=0.365
	ORC03	ORC06	ORC09	ORC12	ORC15	ORC18	ORC03	ORC06	ORC09	ORC12	ORC15	ORC18
CETOT	-0.0774 (22) S=0.366	-0.0605 (21) S=0.397	0.2584 (19) S=0.143	-0.0216 (17) S=0.467	0.1100 (15) S=0.348	0.5719 (14) S=0.016	0.4483 (19) S=0.027	0.2697 (45) S=0.037	0.2494 (50) S=0.040	0.3138 (59) S=0.008	-0.0961 (58) S=0.237	-0.0662 (45) S=0.333
CETCH	-0.0470 (22) S=0.418	0.0148 (21) S=0.475	0.2434 (19) S=0.158	-0.0435 (17) S=0.434	0.0911 (15) S=0.373	0.6595 (14) S=0.005	0.4446 (19) S=0.028	0.2468 (45) S=0.051	0.2730 (50) S=0.028	0.3490 (59) S=0.003	-0.0815 (58) S=0.271	-0.0474 (45) S=0.379
CEBUS	-0.0445 (22) S=0.422	-0.1244 (21) S=0.296	0.3552 (19) S=0.068	0.3148 (17) S=0.109	0.0906 (15) S=0.374	-0.0054 (14) S=0.493	-0.0022 (19) S=0.496	0.1962 (45) S=0.098	-0.0174 (50) S=0.452	-0.0741 (59) S=0.289	-0.0603 (58) S=0.327	-0.0511 (45) S=0.369
CEOTH	-0.1172 (22) S=0.302	-0.1367 (21) S=0.277	0.0075 (19) S=0.488	0.1862 (17) S=0.237	0.1225 (15) S=0.332	0.2438 (14) S=0.200	-0.6625 (19) S=0.001	-0.0867 (45) S=0.286	-0.1229 (50) S=0.198	-0.0194 (59) S=0.442	-0.0529 (58) S=0.347	-0.0476 (45) S=0.378
DRIVE	0.1771 (22) S=0.215	0.0847 (21) S=0.358	0.2924 (19) S=0.112	0.0552 (17) S=0.417	-0.0472 (15) S=0.434	-0.1648 (14) S=0.287	0.0389 (19) S=0.359	0.0729 (45) S=0.317	0.1048 (50) S=0.234	-0.1499 (59) S=0.129	0.0082 (58) S=0.476	-0.0118 (45) S=0.469
	OSP03	OSP06	OSP09	OSP12	OSP15	OSP18	OSP03	OSP06	OSP09	OSP12	OSP15	OSP18
CETOT	-0.3674 (27) S=0.030	-0.1793 (27) S=0.185	-0.3041 (24) S=0.074	-0.1485 (25) S=0.239	-0.3393 (21) S=0.066	0.1759 (18) S=0.242	-0.1983 (50) S=0.084	-0.2028 (71) S=0.045	-0.1850 (66) S=0.069	-0.0839 (70) S=0.245	-0.1262 (69) S=0.151	-0.0730 (54) S=0.300
CETCH	-0.3272 (27) S=0.048	-0.1515 (27) S=0.225	-0.2565 (24) S=0.080	-0.1342 (25) S=0.261	-0.3749 (21) S=0.047	0.1801 (18) S=0.230	-0.1911 (50) S=0.092	-0.2098 (71) S=0.040	-0.2148 (66) S=0.042	-0.0898 (70) S=0.230	-0.1159 (69) S=0.172	-0.1233 (54) S=0.186
CEBUS	-0.1145 (27) S=0.285	-0.0647 (27) S=0.374	-0.0993 (24) S=0.322	-0.1528 (25) S=0.233	0.4400 (21) S=0.023	0.1608 (18) S=0.262	-0.0627 (50) S=0.333	0.0668 (71) S=0.290	0.2976 (66) S=0.008	0.0169 (70) S=0.445	-0.0512 (69) S=0.333	0.0578 (54) S=0.339
CEOTH	-0.0128 (27) S=0.475	-0.0317 (27) S=0.438	-0.1709 (24) S=0.212	-0.1163 (25) S=0.290	-0.2307 (21) S=0.157	-0.1857 (18) S=0.230	-0.0333 (50) S=0.409	0.4560 (71) S=0.001	-0.0483 (66) S=0.350	-0.0575 (70) S=0.318	-0.0458 (69) S=0.354	0.0797 (54) S=0.283
DRIVE	-0.0136 (27) S=0.479	-0.2097 (27) S=0.147	0.0107 (24) S=0.480	-0.1967 (25) S=0.173	-0.0902 (21) S=0.349	-0.0066 (18) S=0.490	0.1445 (50) S=0.158	0.1635 (71) S=0.087	0.2203 (66) S=0.037	0.1204 (70) S=0.160	0.0402 (69) S=0.372	0.2125 (54) S=0.061

BI-VARIATE CORRELATIONS OF CE VARIABLES AND DRIVE vs. OCR, ORC, OSP
Comparing People with MS Before and After TEMPLY
All People Combined

APPENDIX 9V

	Before TEMPLY						After TEMPLY					
	OAC03	OAC06	OAC09	OAC12	OAC15	OAC18	OAC03	OAC06	OAC09	OAC12	OAC15	OAC18
CETOT	-0.2020 (22) S=0.194	0.0393 (21) S=0.433	0.4216 (19) S=0.036	0.3752 (17) S=0.069	0.5554 (15) S=0.016	0.4451 (14) S=0.055	-0.0347 (19) S=0.444	-0.0538 (45) S=0.363	0.3225 (50) S=0.011	0.6188 (59) S=0.001	0.3182 (58) S=0.007	0.5043 (45) S=0.001
CETCH	-0.2664 (22) S=0.115	-0.0620 (21) S=0.395	0.4159 (19) S=0.038	0.3639 (17) S=0.076	0.5436 (15) S=0.018	0.3878 (14) S=0.085	-0.0620 (19) S=0.400	-0.0468 (45) S=0.380	0.2956 (50) S=0.019	0.6135 (59) S=0.001	0.2593 (58) S=0.025	0.3574 (45) S=0.008
CEBUS	0.0434 (22) S=0.424	0.0831 (21) S=0.360	0.1450 (19) S=0.277	0.0505 (17) S=0.424	0.3040 (15) S=0.135	0.2808 (14) S=0.165	0.2344 (19) S=0.167	-0.0620 (45) S=0.343	0.3822 (50) S=0.003	0.2263 (59) S=0.042	0.2341 (58) S=0.038	0.5153 (45) S=0.001
CEOTH	0.3610 (22) S=0.049	0.5373 (21) S=0.003	-0.0169 (19) S=0.473	0.1620 (17) S=0.267	0.0379 (15) S=0.447	0.2013 (14) S=0.245	-0.2255 (19) S=0.177	0.0524 (45) S=0.366	-0.0712 (50) S=0.312	0.0732 (59) S=0.291	0.1814 (58) S=0.086	0.2313 (45) S=0.063
DRIVE	-0.1539 (22) S=0.247	-0.2448 (21) S=0.142	0.3357 (19) S=0.080	-0.2112 (17) S=0.208	-0.1931 (15) S=0.245	-0.1590 (14) S=0.294	0.2743 (19) S=0.128	0.3197 (45) S=0.016	0.2576 (50) S=0.035	0.0640 (59) S=0.315	-0.1359 (58) S=0.155	0.0626 (45) S=0.341
	OCT03	OCT06	OCT09	OCT12	OCT15	OCT18	OCT03	OCT06	OCT09	OCT12	OCT15	OCT18
CETOT	0.2141 (26) S=0.147	-0.1351 (26) S=0.255	0.0150 (23) S=0.473	0.0093 (24) S=0.483	-0.0331 (21) S=0.443	0.2335 (18) S=0.176	-0.2466 (52) S=0.039	-0.0726 (77) S=0.265	0.0902 (71) S=0.227	0.0102 (76) S=0.465	-0.0058 (71) S=0.481	0.0609 (54) S=0.331
CETCH	0.0719 (26) S=0.364	-0.2274 (26) S=0.132	0.0130 (23) S=0.476	-0.0587 (24) S=0.393	-0.0743 (21) S=0.375	0.3198 (18) S=0.098	-0.2510 (52) S=0.036	-0.0842 (77) S=0.233	0.0752 (71) S=0.267	-0.0090 (76) S=0.469	-0.0269 (71) S=0.412	0.0654 (54) S=0.319
CEBUS	0.3142 (26) S=0.059	0.1961 (26) S=0.169	-0.1340 (23) S=0.271	0.3003 (24) S=0.077	-0.0283 (21) S=0.452	-0.1055 (18) S=0.338	0.0468 (52) S=0.371	0.0015 (77) S=0.495	0.0830 (71) S=0.246	-0.0362 (76) S=0.378	0.0474 (71) S=0.347	-0.0190 (54) S=0.446
CEOTH	0.0281 (26) S=0.446	-0.0864 (26) S=0.337	0.2363 (23) S=0.139	0.7447 (24) S=0.001	0.4038 (21) S=0.035	0.1184 (18) S=0.320	-0.1726 (52) S=0.111	0.1190 (77) S=0.151	0.0598 (71) S=0.310	0.2820 (76) S=0.007	0.0350 (71) S=0.386	0.0550 (54) S=0.346
DRIVE	-0.3001 (26) S=0.068	0.1199 (26) S=0.280	0.3287 (23) S=0.063	0.4542 (24) S=0.013	0.0824 (21) S=0.361	-0.0003 (18) S=0.500	0.0082 (52) S=0.477	-0.1229 (77) S=0.144	-0.1485 (71) S=0.108	-0.1508 (76) S=0.097	-0.0507 (71) S=0.337	-0.0218 (54) S=0.438
	OCM03	OCM06	OCM09	OCM12	OCM15	OCM18	OCM03	OCM06	OCM09	OCM12	OCM15	OCM18
CETOT	0.2351 (26) S=0.124	0.2206 (26) S=0.139	0.3989 (23) S=0.030	0.1858 (24) S=0.192	0.4138 (21) S=0.031	-0.2693 (18) S=0.140	0.0117 (51) S=0.468	-0.1577 (76) S=0.087	-0.1544 (70) S=0.101	-0.0751 (75) S=0.261	-0.1422 (70) S=0.120	-0.1160 (54) S=0.202
CETCH	0.1015 (26) S=0.311	0.0731 (26) S=0.361	0.4083 (23) S=0.027	0.1449 (24) S=0.250	0.4330 (21) S=0.025	-0.2446 (18) S=0.164	0.0183 (51) S=0.449	-0.1537 (76) S=0.092	-0.1073 (70) S=0.188	-0.0760 (75) S=0.258	-0.1110 (70) S=0.180	0.0080 (54) S=0.477
CEBUS	0.2538 (26) S=0.105	0.2789 (26) S=0.084	-0.2678 (23) S=0.108	0.1718 (24) S=0.211	-0.1858 (21) S=0.210	-0.2521 (18) S=0.156	-0.0607 (51) S=0.336	-0.1312 (76) S=0.129	-0.3818 (70) S=0.001	-0.0975 (75) S=0.203	-0.1301 (70) S=0.142	-0.2333 (54) S=0.045
CEOTH	0.2525 (26) S=0.107	0.2133 (26) S=0.148	0.1483 (23) S=0.250	0.4483 (24) S=0.014	0.1266 (21) S=0.292	0.0804 (18) S=0.376	-0.0732 (51) S=0.305	0.0782 (76) S=0.251	-0.0688 (70) S=0.286	0.1923 (75) S=0.049	-0.0281 (70) S=0.409	-0.1922 (54) S=0.082
DRIVE	0.0472 (26) S=0.409	0.1571 (26) S=0.222	0.1544 (23) S=0.241	0.3334 (24) S=0.056	0.0920 (21) S=0.346	0.0466 (18) S=0.427	-0.0584 (51) S=0.342	0.0192 (76) S=0.435	-0.0103 (70) S=0.466	-0.1473 (75) S=0.104	-0.0370 (70) S=0.380	-0.2212 (54) S=0.054

BI-VARIATE CORRELATIONS OF CE VARIABLES AND DRIVE vs. OAC, OCT, OCM
Comparing People with MS Before and After TEMPLY
All People Combined

	FORD - APPENDIX 5	NASA - APPENDIX 6	FMC - APPENDIX 7	SYLVANIA - APPENDIX 8	TOTAL GROUP - APPENDIX 9
A-All People	CEOTH c̄ OAC (s)/OCR (w)(-) DRIVE c̄ ORC (w)/OCR (s)	CETOT c̄ OAC (vs)/ORC (s) CETECH c̄ OAC (vs) CEBUS c̄ OAC (s)/OCM (s)(-) CEOTH c̄ OAC (s)/OCT (w)(-)	CETOT c̄ OAC (s)/OCM (w)(-) CETECH c̄ OAC (s) CEBUS c̄ OAC (vs)/OSP (s)/OCM (w)(-) DRIVE c̄ OAC (s)/OCR (w)/OCM (w)(-)/OCT (w)(-)	CETOT c̄ OAC (vs) CETECH c̄ OAC (vs) CEBUS c̄ OSP (vs)/OCR (s)(-)/OCM (w)(-)	CETOT c̄ OAC (s)/ORC (w) CETECH c̄ OAC (s)/ORC (w)/OCT (w)(-) CEBUS c̄ OAC (w)/OCM (w)(-) DRIVE c̄ OSP (w)/ORC (s)
B-With M.S.	CETECH c̄ OAC (s)(+,-) CEOTH c̄ OCR (s)(-) DRIVE c̄ OCM/OCT (s)(-)	CETOT c̄ OAC (vs)/ORC (s) CETECH c̄ OAC (vs)/[illegible] (s)/ OSP [illegible](+,-) CEBUS c̄ OAC (vs)/OCM (s)(-) CEOTH c̄ OAC (vs)	CEBUS c̄ OAC (vs) CEOTH c̄ OCR (s)(-) DRIVE c̄ OAC (vs)(+,-)/ORC (vs)	CETOT c̄ OCT (s) CEBUS c̄ OAC (s)/OSP (vs) DRIVE c̄ OCR (vs)	CETOT c̄ OAC (vs)/ORC (w) CETECH c̄ OAC/ORC (s)/OSP (w)(-) CEBUS c̄ OAC (s), CEOTH c̄ OAC (s)/OCR (w)(-)
C-No M.S.	DRIVE c̄ OAC/ORC/OCR/OCT (s)	CETOT c̄ OAC (vs) CETECH c̄ OAC (vs)	CETOT c̄ OAC (s)/OCR (w)/OCM (s)(-) CETECH c̄ OAC (s) CEBUS c̄ OAC/OSP (vs)/OCR/OCM (s)(-) DRIVE c̄ OCR (w)/OCM/OCT (s)(-)	CETOT c̄ OAC (vs) CETECH c̄ OAC (vs) CEBUS c̄ OAC/OSP (vs)/OCM (s)(-)	CETOT c̄ OAC (s), CETECH c̄ OAC (w) CEBUS c̄ OAC/OCR (w)/OCM (w)(-) CEOTH c̄ OAC (w) DRIVE c̄ OCR (s)/OCM (w)(-)
D-With Ph.D.		CETOT c̄ ORC (vs), CETECH c̄ ORC (vs) CEBUS c̄ OSP (vs) CEOTH c̄ OAC (vs)			
E-Low Schools	DRIVE c̄ ORC (vs)/OCR (w)	CETOT c̄ OAC/ORC (vs), CETECH c̄ OAC/ORC (vs) CEOTH c̄ OAC (s)/OCT (s)(+,-)	CETOT c̄ OAC (vs), CETECH c̄ OAC (vs) CEBUS c̄ OAC (vs), CEOTH c̄ OAC (vs) DRIVE c̄ OCT (s)(-)	CETOT c̄ OAC (vs), CETECH c̄ OAC (vs) CEBUS c̄ OAC/OSP (vs)/OCR (vs)(-) DRIVE c̄ OCR (vs)	CETOT c̄ OAC (s)/ORC (w) CETECH c̄ OAC (s)/ORC (w) CEBUS c̄ OAC (s)/ORC (w)/OCM (w)(-) DRIVE c̄ OCR (w)
F-Top Schools	CETOT c̄ OAC (vs)/OCT (vs)(+,-) CEBUS c̄ OCM (vs)(-) CEOTH c̄ OCM (vs)(-)	CETOT c̄ OAC/ORC (vs)/OCT (vs)(-) CETECH c̄ OAC/ORC (vs)/OCT (vs)(-) CEBUS c̄ OCM (vs)(-), CEOTH c̄ OAC (s)	CETOT c̄ OCT (vs), CETECH c̄ OCT (vs) CEBUS c̄ OAC (vs), CEOTH c̄ OCT (vs) DRIVE c̄ OCM (vs)	CEBUS c̄ OSP (vs) DRIVE c̄ OCT (vs)	CETOT c̄ OAC/ORC (s) CETECH c̄ OAC/ORC (s) CEBUS c̄ OAC (s)/OSP (w)/OCM (s)(-)
G-Low GPA	CETOT c̄ ORC (s) CEBUS c̄ OAC (vs)/OCT (s) DRIVE c̄ OCR (vs)	CETOT c̄ OAC/ORC (vs) CETECH c̄ OAC/ORC (vs) CEOTH c̄ OAC (vs)	CETECH c̄ ORC (vs) CEBUS c̄ OAC (vs)/OCM (vs)(-)	CETOT c̄ OAC/ORC (vs) CETECH c̄ OAC (vs) CEBUS c̄ OAC/OSP (vs)/OCM (vs)(-) CEOTH c̄ OCT (vs)(+,-) DRIVE c̄ OSP (vs)(+,-)/OCM (vs)(-)	CETOT c̄ OAC (vs)/ORC (s) CETECH c̄ OAC (vs)/ORC (s)/OCT (w)(-) CEBUS c̄ OAC (s)/OSP (w)/OCM (w)(-) DRIVE c̄ OCR (s)
H-Mid GPA	CETOT c̄ OCM (s)(-), CEBUS c̄ OAC (vs)/ORC (vs)(+,-) CEOTH c̄ OAC/ORC (vs)(+,-) DRIVE c̄ OCT (vs)	CETOT c̄ OAC (vs)/OCT (vs)(-) CETECH c̄ OAC (vs)/OCT (vs)(-) CEBUS c̄ OAC (vs)	CEBUS c̄ OAC (vs)		CETOT c̄ OAC (s), CETECH c̄ OAC (s) CEBUS c̄ OAC (s) DRIVE c̄ OCR (s)/OCM (w)(-)
I-High GPA	CETOT c̄ OCT (vs) CETECH c̄ OCT (vs) DRIVE c̄ OCM (vs)(-)	CETOT c̄ OAC/ORC (vs), CETECH c̄ OAC/ORC (vs) CEBUS c̄ ORC/OSP (vs)/OCM (vs)(-) DRIVE c̄ OCM (vs)	CETECH c̄ OAC (vs), CEBUS c̄ OAC (vs) CEOTH c̄ OAC (vs) DRIVE c̄ OCT (vs)(-)	CETOT c̄ ORC (vs) CEBUS c̄ OSP (vs) DRIVE c̄ OAC (vs)	CETOT c̄ OAC/ORC (s), CETECH c̄ OAC/ORC (s) CEBUS c̄ ORC (s)/OCM (w)(-) CEOTH c̄ OAC (s)
J-Honors	CETOT c̄ OCT (s) CETECH c̄ OCT (s) CEOTH c̄ ORC (vs)	CETOT c̄ OAC/ORC (vs) CETECH c̄ OAC/ORC (vs) CEBUS c̄ OAC/ORC (s), CEOTH c̄ OAC (vs) DRIVE c̄ OCM (s)	CETOT c̄ OAC (vs) DRIVE c̄ OAC (vs)	CETOT c̄ OCT (vs), CEBUS c̄ OSP (vs) CEOTH c̄ OCT (vs) DRIVE c̄ OCR (vs)	CETOT c̄ OAC (s) CETECH c̄ OAC (s) CEBUS c̄ OAC (s) DRIVE c̄ OAC (s)/OCR (w)
K-No Honors	CETOT c̄ ORC (s), CEBUS c̄ OAC (s) CEOTH c̄ OAC (s) DRIVE c̄ ORC/OCR (s)	CETOT c̄ OAC/OCR (vs), CETECH c̄ OAC/OCR (vs) CEBUS c̄ OCM (vs)(-) CEOTH c̄ ORC (s)	CETOT c̄ OCM (s)(-) CEBUS c̄ OAC/OSP (vs)/OCR (w)/OCM (s)(-) DRIVE c̄ OCT (vs)(-)/OCR (w)	CETOT c̄ OAC (vs), CETECH c̄ OAC (vs) CEBUS c̄ OSP (vs) DRIVE c̄ OSP (vs)(+,-)	CETOT c̄ OAC (s)/ORC (w)/OCM/OCT (w)(-) CETECH c̄ OAC (s)/ORC (w)/OCT (w)(-) CEBUS c̄ OAC (s)/OCM (w)(-) CEOTH c̄ OAC (w), DRIVE c̄ OCM (w)(-)
L-Low IPR	CETOT c̄ OCR (vs) CETECH c̄ OCT (vs)(+ c̄ -)	CETOT c̄ OAC (vs), CETECH c̄ OCT (vs)(+,-) CEOTH c̄ OCT (vs)(+,-) DRIVE c̄ OCM (vs)	CETOT c̄ OCM (vs)(-)/OCR (s) CETECH c̄ OAC (vs)/OCM (vs)(-) CEBUS c̄ ORC/OSP (vs)/OCM (vs)(-) CEOTH c̄ OSP (vs), DRIVE c̄ OSP (vs)	CETOT c̄ OAC (vs) CETECH c̄ OAC (vs)	CETOT c̄ OAC/ORC (s) CETECH c̄ OAC/ORC (s) CEOTH c̄ ORC (w)(-)
M-Mid IPR	CEBUS c̄ OAC (vs) DRIVE c̄ OSP (vs)(+ c̄ -)/OCT (vs)	CETOT c̄ OAC/ORC (vs) CETECH c̄ OAC/ORC (vs)	CETECH c̄ OAC (vs)(+ c̄ -)		CETOT c̄ OAC/ORC (s)/OCR (w)/OCT (w)(-) CETECH c̄ OAC/ORC (s) CEBUS c̄ OAC/ORC (s)
N-High IPR	CETECH c̄ OCM (vs) CEBUS c̄ OAC (vs), CEOTH c̄ ORC (vs)(+ c̄ -)	CETOT c̄ OAC/ORC (vs) CETECH c̄ ORC/ORC (vs) DRIVE c̄ OCM (vs)(-)	CEOTH c̄ OCT (vs) DRIVE c̄ OAC (vs)(+,-)/ORC (vs)(-)	CETOT c̄ ORC (vs) CETECH c̄ ORC (vs) CEBUS c̄ OSP (vs)/OCM (vs)(-) CEOTH c̄ OCM (vs), DRIVE c̄ OCR (vs)	CETOT c̄ OAC/OCR (s) CETECH c̄ OAC (s) CEBUS c̄ OCM (s)(-)
O-Low IFR	CETECH c̄ ORC (vs) CEBUS c̄ OCR (s)	CETOT c̄ OAC (vs) CEBUS c̄ OAC (vs)	CETOT c̄ OCR (s), CEBUS c̄ ORC (vs)/OCR (s) CEOTH c̄ OCR (s) DRIVE c̄ ORC (vs)(+,-)		CETOT c̄ OAC/ORC (vs), CETECH c̄ OAC/ORC (vs) CEBUS c̄ OAC/ORC (s)/OCM (w)(-) DRIVE c̄ OCM (w)(-)
P-Mid IFR	CETOT c̄ OCR (vs), CETECH c̄ OCR (s) CEBUS c̄ OSP (vs)	CETOT c̄ OAC/ORC/OCM (vs) CETECH c̄ OAC/ORC/OCM (vs)	CEBUS c̄ OSP (vs) CEOTH c̄ OSP (vs) DRIVE c̄ OCR (s)/OCM/OCT (vs)(-)	CETECH c̄ OCR (vs)(-)	CETOT c̄ OAC/ORC (s) CETECH c̄ OAC/ORC (s) CEBUS c̄ OAC (s)/OCR (w)
Q-High IFR	CEBUS c̄ OAC (vs)	CETOT c̄ OAC (vs)/OCT (vs)(-) CETECH c̄ ORC (vs) CEBUS c̄ ORC (vs)	CEBUS c̄ OSP (vs)/OCT (vs)(+ c̄ -)		CETOT c̄ OAC/ORC/OCR (s) CETECH c̄ ORC (s) CEBUS c̄ ORC/OCR (s) CEOTH c̄ OCT (s)
R-Low OCR	CEBUS c̄ OAC (s) DRIVE c̄ OCM (s)(-)		CETOT c̄ OAC/OSP (vs) CEBUS c̄ OAC/OSP (vs)/OCM (s)(-) DRIVE c̄ OCT (vs)(-)	CETOT c̄ OAC (s) CETECH c̄ OAC (s) CEBUS c̄ OSP (vs)	CETOT c̄ OAC (s), CETECH c̄ OAC (s) CEBUS c̄ OAC (s)/OSP (w) DRIVE c̄ OAC/ORC (s)/OCM (w)(-)
S-Mid OCR	CEOTH c̄ OSP/OAC (vs)		CETOT c̄ ORC (vs) CEBUS c̄ OAC (vs) DRIVE c̄ OCM (s)(-)		CEBUS c̄ OAC (vs) DRIVE c̄ OAC (s)(+,-)
T-High OCR	CEOTH c̄ OAC (vs) DRIVE c̄ ORC (vs)		CEBUS c̄ OAC (vs), CEOTH c̄ OAC (vs) DRIVE c̄ ORC (vs)(-)		CEBUS c̄ OAC (s)/OCM (s)(-) CEOTH c̄ OAC (s)

CODES (w)(weak), (S)(strong), (VS)(very strong), (-)(negative)

SUMMARY OF BI-VARIATE CORRELATIONS

APPENDIX 9M

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                        OAC06      OSP06     OAC09      OSP09      OAC12      OSP12      OAC15      OSP15      OAC18      OSP18
ALL COMBINED  CETCH   -0.1883    -0.1381    0.1843   -0.1187     0.3938     0.4011     0.2100   -0.1360     0.3343   -0.0530
                      (    27)   (    27)   (    23)  (    23)   (    34)   (    34)   (    46)  (    46)   (   130)  (   130)
                      S=0.173    S=0.246   S=0.200   S=0.295    S=0.011    S=0.009    S=0.081   S=0.184    S=0.001   S=0.275

              CEBUS   -0.0558     0.1325    0.3581    0.5491     0.1598     0.3085     0.0133   -0.1034     0.3531    0.0909
                      (    27)   (    27)   (    23)  (    23)   (    34)   (    34)   (    46)  (    46)   (   130)  (   130)
                      S=0.391    S=0.255   S=0.047   S=0.003    S=0.183    S=0.638    S=0.465   S=0.247    S=0.001   S=0.152


                        OAC06      OSP06     OAC09      OSP09      OAC12      OSP12      OAC15      OSP15      OAC18      OSP18
FORD          CETCH    0.1642    -0.2265    0.0981   -0.3121     0.3172    -0.2476     0.1018   -0.1826    -0.1702   -0.1706
                      (    13)   (    13)   (     6)  (     6)   (    12)   (    12)   (    23)  (    23)   (    36)  (    36)
                      S=0.296    S=0.228   S=0.427   S=0.273    S=0.158    S=0.219    S=0.322   S=0.202    S=0.161   S=0.160

              CEBUS   -0.0863    -0.0586    0.5143    0.3276     0.1921    -0.1666     0.1008   -0.1391     0.0010    0.0952
                      (    13)   (    13)   (     6)  (     6)   (    12)   (    12)   (    23)  (    23)   (    36)  (    36)
                      S=0.390    S=0.425   S=0.148   S=0.263    S=0.275    S=0.261    S=0.324   S=0.263    S=0.498   S=0.290


                        OAC06      OSP06     OAC09      OSP09      OAC12      OSP12      OAC15      OSP15      OAC18      OSP18
NASA          CETCH   -0.6920    -0.4162   -1.0000   99.0000     0.5355     0.5137     0.4663   -0.1564     0.6220   -0.1121
                      (     5)   (     5)   (     2)  (     2)   (    11)   (    11)   (     9)  (     9)   (    31)  (    31)
                      S=0.098    S=0.243   S=*****   S=*****    S=0.045    S=0.053    S=0.092   S=0.344    S=0.001   S=0.274

              CEBUS   -0.0853    -0.3430   -1.0000   99.0000     0.0324     0.2986     0.2931    0.1823     0.1728    0.0748
                      (     5)   (     5)   (     2)  (     2)   (    11)   (    11)   (     9)  (     9)   (    31)  (    31)
                      S=0.446    S=0.286   S=*****   S=*****    S=0.462    S=0.186    S=0.222   S=0.319    S=0.176   S=0.345


                        OAC06      OSP06     OAC09      OSP09      OAC12      OSP12      OAC15      OSP15      OAC18      OSP18
FMC           CETCH   -0.2057     0.2679    0.0946   -0.2135    -0.4463    -0.2641     0.4690    0.8537    -0.0122    0.3765
                      (     6)   (     6)   (    10)  (    10)   (     5)   (     5)   (     5)  (     5)   (    35)  (    35)
                      S=0.348    S=0.304   S=0.398   S=0.277    S=0.226    S=0.322    S=0.213   S=0.033    S=0.472   S=0.013

              CEBUS    0.1547     0.8262    0.0473    0.1183     0.3241     0.6476     0.6270    0.9767     0.6731    0.1618
                      (     6)   (     6)   (    10)  (    10)   (     5)   (     5)   (     5)  (     5)   (    35)  (    35)
                      S=0.385    S=0.021   S=0.448   S=0.372    S=0.297    S=0.119    S=0.129   S=0.002    S=0.001   S=0.177


                        OAC06      OSP06     OAC09      OSP09      OAC12      OSP12      OAC15      OSP15      OAC18      OSP18
SYLVANIA      CETCH   -0.9899    -0.4539    0.4168   -0.0426     0.0106     0.5356     0.4160   -0.1671     0.5554    0.2971
                      (     3)   (     3)   (     5)  (     5)   (     6)   (     6)   (     9)  (     9)   (    28)  (    28)
                      S=0.045    S=0.350   S=0.243   S=0.473    S=0.492    S=0.137    S=0.131   S=0.392    S=0.001   S=0.062

              CEBUS   99.0000    99.0000    0.4324    0.9893    -0.2596     0.5658    -0.4236    0.0343     0.5306    0.1598
                      (     3)   (     3)   (     5)  (     5)   (     6)   (     6)   (     9)  (     9)   (    28)  (    28)
                      S=*****    S=*****   S=0.234   S=0.001    S=0.310    S=0.121    S=0.128   S=0.465    S=0.002   S=0.208
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BI-VARIATE CORRELATIONS - CETECH AND CEBUS vs. OAC AND OSP - YEARS 6 through 18
EACH ORGANIZATION AND ALL COMBINED
UNIQUE GROUPS OF PEOPLE

APPENDIX 9X

	FORD						NASA					
	OPT03	OPT06	OPT09	OPT12	OPT15	OPT18	OPT03	OPT06	OPT09	OPT12	OPT15	OPT18
CETOT	0.2869 (47) S=0.025	-0.0537 (62) S=0.339	0.0661 (53) S=0.319	0.2724 (58) S=0.019	-0.1308 (53) S=0.175	99.0000 (35) S=*****	99.0000 (37) S=*****	99.0000 (42) S=*****	-0.2131 (39) S=0.096	0.1698 (46) S=0.130	-0.1713 (41) S=0.142	0.3656 (32) S=0.020
CETCH	-0.0130 (47) S=0.465	-0.0881 (62) S=0.248	0.0866 (53) S=0.269	0.2758 (58) S=0.018	-0.1174 (53) S=0.201	99.0000 (35) S=*****	99.0000 (37) S=*****	99.0000 (42) S=*****	-0.2074 (39) S=0.103	0.1952 (46) S=0.097	-0.1607 (41) S=0.158	0.3907 (32) S=0.014
CEBUS	0.5832 (47) S=0.001	0.0201 (62) S=0.438	-0.0668 (53) S=0.312	-0.0104 (58) S=0.469	-0.0428 (53) S=0.381	99.0000 (35) S=*****	99.0000 (37) S=*****	99.0000 (42) S=*****	-0.0642 (39) S=0.305	-0.0656 (46) S=0.333	-0.0975 (41) S=0.272	0.0215 (32) S=0.454
CEOTH	-0.0651 (47) S=0.332	0.2016 (62) S=0.058	-0.0629 (53) S=0.327	0.0937 (58) S=0.242	-0.0466 (53) S=0.370	99.0000 (35) S=*****	99.0000 (37) S=*****	99.0000 (42) S=*****	-0.0720 (39) S=0.331	-0.0536 (46) S=0.362	-0.0516 (41) S=0.374	-0.0589 (32) S=0.374
DRIVE	0.0353 (34) S=0.421	0.1637 (44) S=0.144	-0.1895 (36) S=0.134	0.1148 (41) S=0.237	-0.0701 (39) S=0.336	99.0000 (30) S=*****	99.0000 (30) S=*****	99.0000 (34) S=*****	-0.1241 (30) S=0.257	99.0000 (36) S=*****	99.0000 (32) S=*****	-0.4875 (26) S=0.006

	OPB03	OPB06	OPB09	OPB12	OPB15	OPB18	OPB03	OPB06	OPB09	OPB12	OPB15	OPB18
CETOT	0.3212 (46) S=0.013	0.0660 (63) S=0.304	0.1363 (54) S=0.163	0.3304 (56) S=0.006	0.0794 (51) S=0.290	-0.2609 (37) S=0.059	-0.0165 (36) S=0.462	0.0910 (44) S=0.278	0.2528 (40) S=0.058	0.0847 (49) S=0.261	-0.0534 (43) S=0.367	0.5140 (35) S=0.001
CETCH	0.4017 (46) S=0.002	0.1173 (63) S=0.180	0.1664 (54) S=0.115	0.3160 (56) S=0.008	0.0237 (51) S=0.435	-0.2035 (37) S=0.114	-0.0212 (36) S=0.451	0.0679 (44) S=0.331	0.2567 (40) S=0.055	0.1112 (49) S=0.223	-0.0289 (43) S=0.427	0.5082 (35) S=0.001
CEBUS	-0.1065 (46) S=0.248	-0.1220 (63) S=0.169	-0.1148 (54) S=0.204	0.0972 (56) S=0.234	0.0637 (51) S=0.328	-0.1096 (37) S=0.260	0.0229 (36) S=0.447	0.2166 (44) S=0.079	0.0094 (40) S=0.477	-0.1107 (49) S=0.224	-0.1155 (43) S=0.230	0.1729 (35) S=0.160
CEOTH	-0.1102 (46) S=0.228	0.0692 (63) S=0.295	0.0216 (54) S=0.438	-0.0610 (56) S=0.325	0.1884 (51) S=0.093	-0.1020 (37) S=0.274	0.1654 (36) S=0.168	99.0000 (44) S=*****	-0.0346 (40) S=0.468	-0.0766 (49) S=0.314	-0.1026 (43) S=0.256	0.1413 (35) S=0.209
DRIVE	0.0217 (35) S=0.451	-0.0102 (45) S=0.474	0.1383 (37) S=0.207	-0.1341 (40) S=0.205	-0.0771 (37) S=0.325	-0.2045 (31) S=0.135	0.1264 (29) S=0.257	0.2475 (36) S=0.073	0.4290 (31) S=0.008	0.3666 (38) S=0.008	0.1662 (34) S=0.171	-0.0879 (29) S=0.325

APPENDIX 9Y

CE AND DRIVE vs. OPT/OPB

Ford and NASA

	FMC						SYLVANIA					
	OPT03	OPT06	OPT09	OPT12	OPT15	OPT18	OPT03	OPT06	OPT09	OPT12	OPT15	OPT18
CETOT	-0.1208 (33) S=0.251	-0.0386 (30) S=0.420	-0.1201 (26) S=0.279	-0.1858 (30) S=0.163	-0.1202 (36) S=0.242	-0.1644 (33) S=0.180	0.0633 (16) S=0.408	-0.0771 (31) S=0.340	-0.0165 (32) S=0.464	-0.1929 (35) S=0.133	0.1872 (32) S=0.152	0.0904 (29) S=0.321
CETCH	-0.0943 (33) S=0.301	-0.0084 (30) S=0.482	-0.1467 (26) S=0.234	-0.1444 (30) S=0.223	-0.0707 (36) S=0.341	-0.1525 (33) S=0.198	0.0649 (16) S=0.406	-0.0796 (31) S=0.335	-0.0332 (32) S=0.428	-0.1623 (35) S=0.176	-0.0760 (32) S=0.340	0.1937 (29) S=0.157
CEBUS	-0.1013 (33) S=0.287	-0.0059 (30) S=0.488	0.0394 (26) S=0.424	-0.1481 (30) S=0.217	-0.1328 (36) S=0.220	-0.1086 (33) S=0.274	99.0000 (16) S=*****	0.1708 (31) S=0.179	0.2121 (32) S=0.122	-0.1105 (35) S=0.264	0.6392 (32) S=0.001	-0.1827 (29) S=0.171
CEOTH	-0.0340 (33) S=0.420	-0.0688 (30) S=0.359	-0.0434 (26) S=0.417	-0.1006 (30) S=0.299	-0.0910 (36) S=0.299	-0.1112 (33) S=0.269	-0.0667 (16) S=0.403	-0.0843 (31) S=0.326	-0.0464 (32) S=0.401	-0.0666 (35) S=0.352	0.7923 (32) S=0.001	-0.0097 (29) S=0.480
DRIVE	0.1807 (29) S=0.174	0.2232 (26) S=0.137	0.1686 (21) S=0.232	0.0374 (27) S=0.426	-0.0499 (32) S=0.393	-0.0244 (28) S=0.451	0.0051 (11) S=0.494	-0.1586 (24) S=0.230	0.0933 (24) S=0.332	-0.0153 (25) S=0.471	0.0549 (22) S=0.404	0.0991 (19) S=0.343

	OPB03	OPB06	OPB09	OPB12	OPB15	OPB18	OPB03	OPB06	OPB09	OPB12	OPB15	OPB18
CETOT	-0.0884 (33) S=0.312	0.1413 (30) S=0.228	-0.1123 (27) S=0.288	-0.0470 (32) S=0.399	0.0195 (36) S=0.455	0.2331 (35) S=0.089	-0.0822 (19) S=0.369	-0.0666 (33) S=0.356	-0.2108 (37) S=0.105	-0.1328 (39) S=0.210	-0.1492 (36) S=0.193	-0.3437 (31) S=0.029
CETCH	-0.0951 (32) S=0.299	-0.0788 (30) S=0.340	-0.1054 (27) S=0.300	-0.0407 (32) S=0.412	-0.0423 (36) S=0.403	-0.0825 (35) S=0.319	-0.0791 (19) S=0.374	-0.0649 (33) S=0.360	-0.2093 (37) S=0.107	-0.1377 (39) S=0.202	-0.1141 (36) S=0.254	-0.2873 (31) S=0.059
CEBUS	0.2500 (33) S=0.080	-0.0955 (30) S=0.308	-0.0924 (27) S=0.323	-0.0514 (32) S=0.390	0.1818 (36) S=0.144	0.5167 (35) S=0.001	99.0000 (19) S=*****	-0.1421 (33) S=0.215	0.0276 (37) S=0.436	0.0647 (39) S=0.348	-0.0876 (36) S=0.306	-0.1756 (31) S=0.172
CEOTH	-0.1025 (33) S=0.285	0.4632 (30) S=0.005	-0.0555 (27) S=0.392	-0.0123 (32) S=0.473	-0.0142 (36) S=0.467	-0.1143 (35) S=0.257	-0.1134 (19) S=0.322	0.1299 (32) S=0.239	-0.1067 (37) S=0.265	-0.0757 (39) S=0.324	-0.1178 (36) S=0.247	-0.1209 (31) S=0.259
DRIVE	0.3399 (26) S=0.045	-0.1757 (25) S=0.200	-0.1162 (22) S=0.303	-0.1421 (28) S=0.235	-0.1193 (32) S=0.258	-0.1238 (31) S=0.253	0.1940 (14) S=0.253	0.2009 (25) S=0.168	0.1434 (29) S=0.229	0.0344 (29) S=0.429	-0.0353 (25) S=0.434	0.0609 (20) S=0.399

CE AND DRIVE vs. OPT/OPB

FMC and Sylvania

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VARIABLE                         ORC03            MULTIPLE R  R SQUARE  RSQ CHANGE  SIMPLE R          B                 BETA

MA                                                 0.29186    0.08518   0.08518    -0.29186    -1.701060          -0.32558
IGPA        BS UNDERGRADUATE GPS <1.0-4.0>         0.34325    0.11782   0.03264    -0.24428    -0.8361752         -0.17745
CEBUS03                                            0.39411    0.15532   0.03750     0.14744     0.2166559D-01      0.22221
PHD                                                0.43125    0.18598   0.03066     0.01971     2.212677           0.18778
CETCH03                                            0.46330    0.21465   0.02867     0.09880     0.6026155D-02      0.18082
ISH         ACADEMIC HONORS                        0.47721    0.22773   0.01309    -0.26726    -0.7053914         -0.13219
DRIVECUR    DRIVE <CURRENT SUPERVISOR>             0.47823    0.22870   0.00097     0.02131     0.4020679D-01      0.03160
(CONSTANT)                                                                                      2.139263

VARIABLE                         ORC05            MULTIPLE R  R SQUARE  RSQ CHANGE  SIMPLE R          B                 BETA

DRIVECUR    DRIVE <CURRENT SUPERVISOR>             0.28661    0.08214   0.08214     0.28661     0.5129991          0.26675
MA                                                 0.34012    0.11568   0.03354     0.19684     1.346019           0.17047
IGPA        BS UNDERGRADUATE GPS <1.0-4.0>         0.36690    0.13462   0.01894    -0.11733    -1.504290          -0.21124
ISH         ACADEMIC HONORS                        0.40595    0.16479   0.03018     0.15533     1.623967           0.20137
CEBUS05                                            0.40791    0.16639   0.00160     0.03822     0.3260591D-02      0.03737
PHD                                                0.40938    0.16759   0.00120    -0.00241    -0.6666759         -0.03744
(CONSTANT)                                                                                     -1.343609

VARIABLE                         ORC09            MULTIPLE R  R SQUARE  RSQ CHANGE  SIMPLE R          B                 BETA

DRIVECUR    DRIVE <CURRENT SUPERVISOR>             0.34963    0.12224   0.12224     0.34963     0.4416140          0.33481
CETCH09                                            0.41717    0.17403   0.05179     0.23187     0.3803580D-02      0.20175
MA                                                 0.42472    0.18039   0.00635     0.13509     0.5236913          0.09670
IGPA        BS UNDERGRADUATE GPS <1.0-4.0>         0.43220    0.18679   0.00641    -0.10639    -0.4644376         -0.09509
ISH         ACADEMIC HONORS                        0.43320    0.18766   0.00087     0.02584     0.1873184          0.03387
CEBUS09                                            0.43386    0.18823   0.00057    -0.01416    -0.1062122D-02     -0.02411
(CONSTANT)                                                                                     -3.632223

VARIABLE                         ORC12            MULTIPLE R  R SQUARE  RSQ CHANGE  SIMPLE R          B                 BETA

MA                                                 0.23804    0.05666   0.05666     0.23804     1.013794           0.24687
CEBUS12                                            0.30461    0.09279   0.03612    -0.16155    -0.6159212D-02     -0.19760
DRIVECUR    DRIVE <CURRENT SUPERVISOR>             0.32408    0.10503   0.01224     0.12028     0.1216106          0.12159
IGPA        BS UNDERGRADUATE GPS <1.0-4.0>         0.33281    0.11076   0.00573     0.11488     0.4131044          0.11154
CETCH12                                            0.34136    0.11653   0.00576     0.09772     0.9447113D-03      0.07951
ISH         ACADEMIC HONORS                        0.34412    0.11842   0.00189     0.05940    -0.2176068         -0.05188
PHD                                                0.34572    0.11952   0.00110     0.07592    -0.3337457         -0.03603
(CONSTANT)                                                                                     -2.879840

VARIABLE                         ORC15            MULTIPLE R  R SQUARE  RSQ CHANGE  SIMPLE R          B                 BETA

IGPA        BS UNDERGRADUATE GPS <1.0-4.0>         0.27362    0.07487   0.07487    -0.27362    -6.927903          -0.31822
MA                                                 0.37433    0.14012   0.06525     0.18386     8.026682           0.33251
CETCH15                                            0.40597    0.16481   0.02469    -0.10079    -0.9416431D-02     -0.14699
CEBUS15                                            0.41266    0.17029   0.00548    -0.06917    -0.1269453D-01     -0.08099
ISH         ACADEMIC HONORS                        0.41651    0.17348   0.00319    -0.10755    -1.662108          -0.06742
PHD                                                0.41795    0.17469   0.00121    -0.00764    -2.077880          -0.03817
DRIVECUR    DRIVE <CURRENT SUPERVISOR>             0.41865    0.17527   0.00058     0.03705    -0.1433460         -0.02438
(CONSTANT)                                                                                     22.49878

VARIABLE                         ORC18            MULTIPLE R  R SQUARE  RSQ CHANGE  SIMPLE R          B                 BETA

IGPA        BS UNDERGRADUATE GPS <1.0-4.0>         0.37427    0.14008   0.14008    -0.37427    -5.709152          -0.43285
MA                                                 0.48547    0.23568   0.09560     0.21242     6.127995           0.41902
CETCH18                                            0.51953    0.26991   0.03423    -0.11980    -0.6682822D-02     -0.17964
CEBUS18                                            0.53040    0.28132   0.01141    -0.11068    -0.1119199D-01     -0.12599
DRIVECUR    DRIVE <CURRENT SUPERVISOR>             0.54020    0.29182   0.01050    -0.02112    -0.3758949         -0.10581
PHD                                                0.54695    0.29915   0.00733    -0.05677    -3.122678          -0.09467
ISH         ACADEMIC HONORS                        0.54925    0.30168   0.00253    -0.12997    -0.8724024         -0.05841
(CONSTANT)                                                                                     20.52548
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APPENDIX 10A

MULTIPLE REGRESSION - FORD
VS. ORC

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VARIABLE                           OSP03      MULTIPLE R  R SQUARE  RSQ CHANGE   SIMPLE R            B                 BETA

DRIVECUR    DRIVE <CURRENT SUPERVISOR>          0.23182   0.05374    0.05374     0.23182        2.943118             0.21968
ISH         ACADEMIC HONORS                     0.28454   0.08096    0.02722    -0.17447      -13.51015             -0.24048
MA                                              0.31152   0.09705    0.01608     0.06992       10.16737              0.18484
CETCH03                                         0.34029   0.11580    0.01875    -0.12646     -0.4966285D-01        -0.14154
IGPA        BS UNDERGRADUATE GPS <1.0-4.0>      0.34694   0.12037    0.00457    -0.01557        4.752219             0.09579
PHD                                             0.35384   0.12521    0.00484    -0.03829      -10.09707             -0.08139
CEBUS03                                         0.36067   0.13008    0.00488    -0.06669     -0.7314063D-01        -0.07125
(CONSTANT)                                                                                    -33.87449


VARIABLE                           OSP06      MULTIPLE R  R SQUARE  RSQ CHANGE   SIMPLE R            B                 BETA

CETCH06                                         0.20161   0.04065    0.04065    -0.20161     -0.5670351D-01        -0.22935
CEBUS06                                         0.21732   0.04723    0.00658    -0.07113     -0.6212507D-01        -0.09326
MA                                              0.23236   0.05399    0.00676     0.03161        8.886785             0.14741
ISH         ACADEMIC HONORS                     0.25177   0.06339    0.00940    -0.07664       -4.920529            -0.07991
PHD                                             0.26321   0.06928    0.00589    -0.05650       -9.916878            -0.07294
DRIVECUR    DRIVE <CURRENT SUPERVISOR>          0.26871   0.07220    0.00292     0.06775        0.7404684            0.05043
IGPA        BS UNDERGRADUATE GPS <1.0-4.0>      0.27163   0.07378    0.00158    -0.05664       -2.482307            -0.04566
(CONSTANT)                                                                                     13.22411


VARIABLE                           OSP09      MULTIPLE R  R SQUARE  RSQ CHANGE   SIMPLE R            B                 BETA

CETCH09                                         0.19469   0.03791    0.03791    -0.19469     -0.4755401D-01        -0.22984
MA                                              0.28278   0.07997    0.04206     0.16783       12.54268              0.21104
PHD                                             0.30813   0.09495    0.01498    -0.05197      -17.72523             -0.13223
ISH         ACADEMIC HONORS                     0.31821   0.10125    0.00631     0.12969        4.437144             0.07310
CEBUS09                                         0.32321   0.10446    0.00320     0.09636      0.2685834D-01         0.05555
IGPA        BS UNDERGRADUATE GPS <1.0-4.0>      0.32435   0.10520    0.00074     0.10042        1.755359             0.03275
DRIVECUR    DRIVE <CURRENT SUPERVISOR>          0.32473   0.10543    0.00025     0.01821        0.2284947            0.01578
(CONSTANT)                                                                                      3.435091


VARIABLE                           OSP12      MULTIPLE R  R SQUARE  RSQ CHANGE   SIMPLE R            B                 BETA

ISH         ACADEMIC HONORS                     0.17855   0.03188    0.03188     0.17855       24.01222              0.15043
DRIVECUR    DRIVE <CURRENT SUPERVISOR>          0.23614   0.05576    0.02388     0.14700        5.711423             0.15004
CETCH12                                         0.27676   0.07660    0.02083    -0.13199     -0.6993045D-01        -0.15466
PHD                                             0.29366   0.08624    0.00964    -0.07005      -52.10437             -0.14782
MA                                              0.31372   0.09842    0.01218     0.12414       19.70932              0.12611
IGPA        BS UNDERGRADUATE GPS <1.0-4.0>      0.31772   0.10095    0.00253     0.11037        8.214503             0.05828
CEBUS12                                         0.31894   0.10172    0.00078     0.00162     -0.3345447D-01        -0.02620
(CONSTANT)                                                                                    -59.93456


VARIABLE                           OSP15      MULTIPLE R  R SQUARE  RSQ CHANGE   SIMPLE R            B                 BETA

ISH         ACADEMIC HONORS                     0.16583   0.02750    0.02750     0.16583       59.25614              0.13793
CETCH15                                         0.19979   0.03991    0.01241    -0.09869      -0.1346059            -0.12058
MA                                              0.22191   0.04924    0.00933     0.13399       73.34293              0.17436
PHD                                             0.25304   0.06403    0.01479    -0.05870     -136.7131              -0.14411
DRIVECUR    DRIVE <CURRENT SUPERVISOR>          0.27167   0.07381    0.00978    -0.09347      -11.19173             -0.10924
CEBUS15                                         0.29224   0.08541    0.01160    -0.07725      -0.3049491            -0.11132
(CONSTANT)                                                                                    148.9578


VARIABLE                           OSP18      MULTIPLE R  R SQUARE  RSQ CHANGE   SIMPLE R            B                 BETA

DRIVECUR    DRIVE <CURRENT SUPERVISOR>          0.20610   0.04248    0.04248     0.20610        6.934822             0.23120
CEBUS18                                         0.26685   0.07121    0.02873     0.14985        0.1316768            0.17603
CETCH18                                         0.29539   0.08726    0.01605    -0.10744     -0.3843250D-01        -0.12268
PHD                                             0.31535   0.09945    0.01219    -0.12087      -33.45276             -0.12044
ISH         ACADEMIC HONORS                     0.34075   0.11611    0.01666     0.11171       16.33252              0.12985
MA                                              0.34533   0.11925    0.00314    -0.03327       -8.321609            -0.06757
IGPA        BS UNDERGRADUATE GPS <1.0-4.0>      0.34858   0.12151    0.00226     0.05521        6.009379             0.05410
(CONSTANT)                                                                                    -58.50838
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MULTIPLE REGRESSION - FORD
VS. OSP

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VARIABLE                                    OCR    MULTIPLE R  R SQUARE  RSQ CHANGE  SIMPLE R              B                 BETA

DRIVECUR    DRIVE <CURRENT SUPERVISOR>              0.34970    0.12229    0.12229    0.34970     0.5600636D-01         0.38630
IGPA        BS UNDERGRADUATE GPS <1.0-4.0>          0.41734    0.17417    0.05188    0.19186     0.9913955D-01         0.18466
CEBUS03                                             0.44843    0.20109    0.02692    0.14540     0.1768533D-02         0.15921
ISH         ACADEMIC HONORS                         0.45302    0.20522    0.00413    0.14138     0.3817387D-01         0.06279
MA                                                  0.45383    0.20596    0.00074    0.13022     0.2536799D-01         0.04262
PHD                                                 0.45455    0.20661    0.00065    0.03291    -0.3754630D-01        -0.02797
CETCH03                                             0.45516    0.20717    0.00055    0.00022    -0.9147161D-04        -0.02409
(CONSTANT)                                                                                      -0.3153560

VARIABLE                                    OCR    MULTIPLE R  R SQUARE  RSQ CHANGE  SIMPLE R              B                 BETA

DRIVECUR    DRIVE <CURRENT SUPERVISOR>              0.34970    0.12229    0.12229    0.34970     0.5435176D-01         0.37488
IGPA        BS UNDERGRADUATE GPS <1.0-4.0>          0.41734    0.17417    0.05188    0.19186     0.1086515             0.20238
CEBUS06                                             0.43953    0.19318    0.01901    0.13963     0.9064267D-03         0.13780
CETCH06                                             0.44670    0.19954    0.00636    0.05789     0.1729784D-03         0.07086
ISH         ACADEMIC HONORS                         0.45031    0.20278    0.00323    0.14138     0.3464708D-01         0.05699
PHD                                                 0.45087    0.20329    0.00051    0.03291    -0.4136566D-01        -0.03081
MA                                                  0.45148    0.20383    0.00054    0.13022     0.1609577D-01         0.02704
(CONSTANT)                                                                                      -0.3341145

VARIABLE                                    OCR    MULTIPLE R  R SQUARE  RSQ CHANGE  SIMPLE R              B                 BETA

DRIVECUR    DRIVE <CURRENT SUPERVISOR>              0.34970    0.12229    0.12229    0.34970     0.5328895D-01         0.36755
IGPA        BS UNDERGRADUATE GPS <1.0-4.0>          0.41734    0.17417    0.05188    0.19186     0.1071193             0.19953
CEBUS09                                             0.43446    0.18876    0.01459    0.14224     0.5590315D-03         0.11545
ISH         ACADEMIC HONORS                         0.43890    0.19264    0.00388    0.14138     0.3324007D-01         0.05467
CETCH09                                             0.44205    0.19542    0.00279    0.04682     0.1014649D-03         0.04896
MA                                                  0.44258    0.19588    0.00046    0.13022     0.1950495D-01         0.03277
PHD                                                 0.44337    0.19658    0.00070    0.03291    -0.3859618D-01        -0.02875
(CONSTANT)                                                                                      -0.3181439

VARIABLE                                    OCR    MULTIPLE R  R SQUARE  RSQ CHANGE  SIMPLE R              B                 BETA

DRIVECUR    DRIVE <CURRENT SUPERVISOR>              0.34970    0.12229    0.12229    0.34970     0.5361958D-01         0.36983
IGPA        BS UNDERGRADUATE GPS <1.0-4.0>          0.41734    0.17417    0.05188    0.19186     0.1103669             0.20558
CEBUS12                                             0.44450    0.19758    0.02341    0.16696     0.6512157D-03         0.14413
CETCH12                                             0.45105    0.20345    0.00587    0.06265     0.1170110D-03         0.06794
ISH         ACADEMIC HONORS                         0.45372    0.20586    0.00241    0.14138     0.2919791D-01         0.04802
MA                                                  0.45409    0.20619    0.00033    0.13022     0.1660009D-01         0.02789
PHD                                                 0.45465    0.20671    0.00051    0.03291    -0.3298402D-01        -0.02457
(CONSTANT)                                                                                      -0.3353358

VARIABLE                                    OCR    MULTIPLE R  R SQUARE  RSQ CHANGE  SIMPLE R              B                 BETA

DRIVECUR    DRIVE <CURRENT SUPERVISOR>              0.34970    0.12229    0.12229    0.34970     0.5522749D-01         0.38092
IGPA        BS UNDERGRADUATE GPS <1.0-4.0>          0.41734    0.17417    0.05188    0.19186     0.1111452             0.20703
CEBUS15                                             0.43328    0.18773    0.01356    0.09343     0.3707818D-03         0.09593
CETCH15                                             0.44026    0.19383    0.00610    0.07849     0.1130377D-03         0.07155
ISH         ACADEMIC HONORS                         0.44307    0.19631    0.00248    0.14138     0.2968202D-01         0.04882
PHD                                                 0.44344    0.19664    0.00033    0.03291    -0.3615099D-01        -0.02693
MA                                                  0.44413    0.19725    0.00061    0.13022     0.1702347D-01         0.02860
(CONSTANT)                                                                                      -0.3532666

VARIABLE                                    OCR    MULTIPLE R  R SQUARE  RSQ CHANGE  SIMPLE R              B                 BETA

DRIVECUR    DRIVE <CURRENT SUPERVISOR>              0.34970    0.12229    0.12229    0.34970     0.5587512D-01         0.38539
IGPA        BS UNDERGRADUATE GPS <1.0-4.0>          0.41734    0.17417    0.05188    0.19186     0.1091562             0.20332
CEBUS18                                             0.44505    0.19807    0.02390    0.13223     0.4984612D-03         0.13786
CETCH18                                             0.44957    0.20211    0.00405    0.06669     0.8730488D-04         0.05766
ISH         ACADEMIC HONORS                         0.45194    0.20425    0.00213    0.14138     0.2751435D-01         0.04526
MA                                                  0.45227    0.20455    0.00030    0.13022     0.1557381D-01         0.02616
PHD                                                 0.45271    0.20495    0.00040    0.03291    -0.2903179D-01        -0.02162
(CONSTANT)                                                                                      -0.3569208
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APPENDIX 10C

MULTIPLE REGRESSION - FORD
VS. OCR

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VARIABLE                      OCT03                  MULTIPLE R  R SQUARE  RSQ CHANGE   SIMPLE R           B                    BETA

IGPA        BS UNDERGRADUATE GPS <1.0-4.0>             0.08469    0.00717   0.00717    -0.08469    -0.2560408              -0.09906
CEBUS03                                                0.11709    0.01371   0.00654     0.07216     0.4292612D-02           0.08027
PHD                                                    0.13086    0.01712   0.00341    -0.08091    -0.3125653              -0.04836
ISH         ACADEMIC HONORS                            0.13797    0.01904   0.00191     0.0         0.1974754               0.06747
CETCH03                                                0.14633    0.02141   0.00238    -0.05130    -0.7824798D-03          -0.04280
MA                                                     0.15119    0.02286   0.00145    -0.05879    -0.1252566              -0.04371
(CONSTANT)                                                                                          3.566451

VARIABLE                       OCT06                 MULTIPLE R  R SQUARE  RSQ CHANGE   SIMPLE R           B                    BETA

MA                                                     0.09977    0.00995   0.00995    -0.09977    -0.3018393              -0.11649
IGPA        BS UNDERGRADUATE GPS <1.0-4.0>             0.12372    0.01531   0.00535    -0.09459    -0.2543174              -0.10883
ISH         ACADEMIC HONORS                            0.15030    0.02259   0.00728     0.01171     0.2685902               0.10149
DRIVECUR    DRIVE <CURRENT SUPERVISOR>                 0.15659    0.02452   0.00193     0.04530     0.2876883D-01           0.04889
CEBUS06                                                0.16136    0.02604   0.00152     0.02215     0.1122947D-02           0.03922
(CONSTANT)                                                                                          3.192216

VARIABLE                         OCT09               MULTIPLE R  R SQUARE  RSQ CHANGE   SIMPLE R           B                    BETA

IGPA        BS UNDERGRADUATE GPS <1.0-4.0>             0.28499    0.08122   0.08122    -0.28499    -0.6663236              -0.29176
CEBUS09                                                0.30506    0.09306   0.01184     0.08947     0.2219094D-02           0.10773
DRIVECUR    DRIVE <CURRENT SUPERVISOR>                 0.31270    0.09778   0.00472    -0.03739    -0.4551253D-01          -0.07379
ISH         ACADEMIC HONORS                            0.31835    0.10135   0.00357    -0.17534    -0.2099628              -0.08118
MA                                                     0.32356    0.10469   0.00334    -0.02386     0.1512861               0.05974
CETCH09                                                0.32762    0.10733   0.00264    -0.02837    -0.4595853D-03          -0.05214
PHD                                                    0.32976    0.10874   0.00141    -0.02691     0.2322123               0.04066
(CONSTANT)                                                                                          4.900010

VARIABLE                    OCT12                    MULTIPLE R  R SQUARE  RSQ CHANGE   SIMPLE R           B                    BETA

MA                                                     0.24421    0.05964   0.05964    -0.24421    -0.4391822              -0.18153
PHD                                                    0.27003    0.07292   0.01328    -0.19056    -0.5798348              -0.10627
DRIVECUR    DRIVE <CURRENT SUPERVISOR>                 0.29415    0.08653   0.01361    -0.12605    -0.7485633D-01          -0.12704
IGPA        BS UNDERGRADUATE GPS <1.0-4.0>             0.31196    0.09732   0.01079    -0.16310    -0.2294445              -0.10516
CETCH12                                                0.31404    0.09862   0.00131     0.01519     0.2593488D-03           0.03705
CEBUS12                                                0.31443    0.09887   0.00024    -0.03530    -0.2887668D-03          -0.01573
(CONSTANT)                                                                                          3.921899

VARIABLE                   OCT15                     MULTIPLE R  R SQUARE  RSQ CHANGE   SIMPLE R           B                    BETA

CETCH15                                                0.28535    0.08143   0.08143     0.28535     0.1758226D-02           0.29531
DRIVECUR    DRIVE <CURRENT SUPERVISOR>                 0.33394    0.11152   0.03009    -0.18075    -0.9785374D-01          -0.17908
MA                                                     0.35350    0.12496   0.01345    -0.07834    -0.3247982              -0.14477
ISH         ACADEMIC HONORS                            0.36521    0.13338   0.00842     0.07273     0.3607137               0.16742
IGPA        BS UNDERGRADUATE GPS <1.0-4.0>             0.38667    0.14952   0.01614    -0.10133    -0.3058352              -0.15115
CEBUS15                                                0.39084    0.15275   0.00324    -0.00703    -0.7792808D-03          -0.05349
PHD                                                    0.39322    0.15462   0.00187    -0.01060     0.2377367               0.04698
(CONSTANT)                                                                                          4.279853

VARIABLE                             OCT18           MULTIPLE R  R SQUARE  RSQ CHANGE   SIMPLE R           B                    BETA

DRIVECUR    DRIVE <CURRENT SUPERVISOR>                 0.29975    0.08985   0.08985     0.29975     0.1880749               0.33502
MA                                                     0.42365    0.17948   0.08963    -0.28446    -1.039107               -0.45081
ISH         ACADEMIC HONORS                            0.50925    0.25934   0.07986     0.14294     0.8049179               0.34191
CEBUS18                                                0.51869    0.26904   0.00970     0.04135     0.1493696D-02           0.10669
IGPA        BS UNDERGRADUATE GPS <1.0-4.0>             0.52729    0.27803   0.00899    -0.08388    -0.2553575              -0.12284
PHD                                                    0.53633    0.28765   0.00962    -0.02892     0.5610505               0.10793
CETCH18                                                0.53733    0.28872   0.00107    -0.01203     0.1973263D-03           0.03366
(CONSTANT)                                                                                          1.467432
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APPENDIX 10D

MULTIPLE REGRESSION - FORD
VS. OCT

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VARIABLE                            OCM03               MULTIPLE R  R SQUARE  RSQ CHANGE  SIMPLE R            B                  BETA

IGPA       BS UNDERGRADUATE GPS <1.0-4.0>                0.25455   0.06480   0.06480    0.25455     0.5813295            0.22179
CEBUS03                                                  0.28676   0.08223   0.01743    0.15636     0.7752115D-02        0.14294
CETCH03                                                  0.30400   0.09242   0.01019    0.09929     0.1915959D-02        0.10335
PHD                                                      0.31405   0.09863   0.00621    0.13454     0.5913440            0.09022
MA                                                       0.31530   0.09941   0.00078    0.08737    -0.8452565D-01       -0.02908
DRIVECUR   DRIVE <CURRENT SUPERVISOR>                    0.31597   0.09984   0.00043   -0.05610    -0.1480356D-01       -0.02091
(CONSTANT)                                                                                          1.996043

VARIABLE                                    OCM06       MULTIPLE R  R SQUARE  RSQ CHANGE  SIMPLE R            B                  BETA

MA                                                       0.19659   0.03865   0.03865    0.19659     0.4836738            0.16752
DRIVECUR   DRIVE <CURRENT SUPERVISOR>                    0.23396   0.05474   0.01609    0.13626     0.9646546D-01        0.13718
CETCH06                                                  0.25387   0.06445   0.00971    0.13477     0.1417155D-02        0.11968
IGPA       BS UNDERGRADUATE GPS <1.0-4.0>                0.26965   0.07272   0.00827    0.10715     0.3576912            0.13736
ISH        ACADEMIC HONORS                               0.29271   0.08568   0.01296   -0.00350    -0.3827790           -0.12980
CEBUS06                                                  0.29466   0.08682   0.00114    0.04669     0.1156517D-02        0.03625
PHD                                                      0.29578   0.08749   0.00066    0.10287     0.1817082            0.02790
(CONSTANT)                                                                                          1.294254

VARIABLE                                 OCM09          MULTIPLE R  R SQUARE  RSQ CHANGE  SIMPLE R            B                  BETA

CEBUS09                                                  0.21202   0.04495   0.04495   -0.21202    -0.4730208D-02       -0.22077
DRIVECUR   DRIVE <CURRENT SUPERVISOR>                    0.25780   0.06646   0.02151   -0.15029    -0.8944992D-01       -0.13943
PHD                                                      0.28374   0.08051   0.01404   -0.10835    -0.8293976           -0.13962
IGPA       BS UNDERGRADUATE GPS <1.0-4.0>                0.29325   0.08600   0.00549    0.04341     0.1924508            0.08101
CETCH09                                                  0.29775   0.08866   0.00266    0.04348     0.4744687D-03        0.05174
(CONSTANT)                                                                                          3.337086

VARIABLE                                 OCM12          MULTIPLE R  R SQUARE  RSQ CHANGE  SIMPLE R            B                  BETA

CEBUS12                                                  0.19746   0.03899   0.03899   -0.19746    -0.3673696D-02       -0.18139
PHD                                                      0.26420   0.06980   0.03081    0.18586     1.247822             0.20734
ISH        ACADEMIC HONORS                               0.31711   0.10056   0.03076   -0.15753    -0.4389100           -0.16105
DRIVECUR   DRIVE <CURRENT SUPERVISOR>                    0.35739   0.12773   0.02717   -0.16047    -0.1159025           -0.17834
CETCH12                                                  0.38231   0.14616   0.01843    0.11998     0.8915072D-03        0.11548
IGPA       BS UNDERGRADUATE GPS <1.0-4.0>                0.39893   0.15915   0.01299   -0.13383    -0.3225964           -0.13405
MA                                                       0.40323   0.16259   0.00345    0.03640     0.1801618            0.06752
(CONSTANT)                                                                                          4.677934

VARIABLE                                 OCM15          MULTIPLE R  R SQUARE  RSQ CHANGE  SIMPLE R            B                  BETA

ISH        ACADEMIC HONORS                               0.34088   0.11620   0.11620   -0.34088    -0.7617584           -0.32500
CETCH15                                                  0.39461   0.15572   0.03952   -0.22376    -0.1197642D-02       -0.19665
DRIVECUR   DRIVE <CURRENT SUPERVISOR>                    0.40111   0.16089   0.00517   -0.05316    -0.4300074D-01       -0.07693
PHD                                                      0.40361   0.16290   0.00201   -0.09325    -0.2821555           -0.05452
CEBUS15                                                  0.40599   0.16482   0.00192   -0.09301    -0.7080964D-03       -0.04752
MA                                                       0.40638   0.16514   0.00032   -0.15604     0.4762066D-01        0.02075
(CONSTANT)                                                                                          3.125866

VARIABLE                            OCM18               MULTIPLE R  R SQUARE  RSQ CHANGE  SIMPLE R            B                  BETA

DRIVECUR   DRIVE <CURRENT SUPERVISOR>                    0.40166   0.16133   0.16133   -0.40166    -0.2523743           -0.40019
MA                                                       0.44092   0.19441   0.03308   -0.20117    -0.3065713           -0.11840
CEBUS18                                                  0.45431   0.20640   0.01199   -0.09707    -0.1924868D-02       -0.12239
PHD                                                      0.46287   0.21425   0.00785   -0.13128    -0.6327502           -0.10835
ISH        ACADEMIC HONORS                               0.46747   0.21853   0.00428   -0.11826    -0.2967620           -0.11222
IGPA       BS UNDERGRADUATE GPS <1.0-4.0>                0.47669   0.22723   0.00870    0.03856     0.2527343            0.10823
CETCH18                                                  0.47752   0.22802   0.00079   -0.00299     0.1902736D-03        0.02889
(CONSTANT)                                                                                          4.261322
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VARIABLE                                              MULTIPLE R   R SQUARE   RSQ CHANGE    SIMPLE R             B              BETA

DRIVECUR    DRIVE <CURRENT SUPERVISOR>                  0.32608     0.10633    0.10633      0.32608         1260.924          0.30037
CETCH03                                                 0.46763     0.21868    0.11235     -0.32329        -28.67393         -0.31291
PHD                                                     0.55297     0.30576    0.08710      0.27659         10988.03          0.33913
MA                                                      0.56687     0.32134    0.01556     -0.06674        -1952.635         -0.13592
CEBUS03                                                 0.57926     0.33557    0.01423      0.07274         31.26996          0.11664
ISH         ACADEMIC HONORS                             0.58189     0.33859    0.00303     -0.10272        -1256.929         -0.08566
IGPA        HS UNDERGRADUATE GPS <1.0-4.0>              0.58493     0.34214    0.00354      0.04871         880.2478          0.06794
(CONSTANT)                                                                                                 -197.7600

VARIABLE                                              MULTIPLE R   R SQUARE   RSQ CHANGE    SIMPLE R             B              BETA

DRIVECUR    DRIVE <CURRENT SUPERVISOR>                  0.25235     0.06366    0.06368      0.25235         1183.720          0.26328
PHD                                                     0.35227     0.12410    0.06042      0.24514         11558.29          0.27762
CEBUS06                                                 0.43490     0.16914    0.04504      0.23760         52.88703          0.29027
CETCH06                                                 0.44109     0.19456    0.00542     -0.06972        -5.414624         -0.07152
ISH         ACADEMIC HONORS                             0.44331     0.19652    0.00196      0.07198         1517.641          0.08049
MA                                                      0.44640     0.19927    0.00275      0.07745        -1067.403         -0.05782
IGPA        HS UNDERGRADUATE GPS <1.0-4.0>              0.44804     0.20074    0.00147      0.03773        -731.9668         -0.04307
(CONSTANT)                                                                                                  6550.485

VARIABLE                                              MULTIPLE R   R SQUARE   RSQ CHANGE    SIMPLE R             B              BETA

CEBUS09                                                 0.32695     0.10689    0.10689      0.32695         41.13420          0.31362
CETCH09                                                 0.36732     0.13493    0.02603      0.16290         7.911895          0.14096
DRIVECUR    DRIVE <CURRENT SUPERVISOR>                  0.39752     0.15802    0.02310      0.15968         545.7223          0.13896
MA                                                      0.40501     0.16403    0.00601      0.15201         1963.822          0.12180
IGPA        HS UNDERGRADUATE GPS <1.0-4.0>              0.41338     0.17088    0.00685     -0.06448        -1094.307         -0.07525
PHD                                                     0.41774     0.17451    0.00363     -0.05291        -2372.961         -0.06625
(CONSTANT)                                                                                                  13933.01

VARIABLE                                              MULTIPLE R   R SQUARE   RSQ CHANGE    SIMPLE R             B              BETA

CETCH12                                                 0.18820     0.03542    0.03542      0.18820         9.202120          0.18137
IGPA        HS UNDERGRADUATE GPS <1.0-4.0>              0.23731     0.05632    0.02090      0.13398         1567.755          0.09912
CEBUS12                                                 0.26106     0.06815    0.01183      0.12099         14.65661          0.11011
PHD                                                     0.28070     0.07879    0.01064      0.12990         3732.266          0.09436
MA                                                      0.28343     0.08033    0.00154      0.14091         596.6205          0.03402
ISH         ACADEMIC HONORS                             0.28446     0.08092    0.00058      0.11745         510.0874          0.02048
DRIVECUR    DRIVE <CURRENT SUPERVISOR>                  0.28512     0.08129    0.00036      0.00616         83.51615          0.01955
(CONSTANT)                                                                                                  15019.90

VARIABLE                                              MULTIPLE R   R SQUARE   RSQ CHANGE    SIMPLE R             B              BETA

ISH         ACADEMIC HONORS                             0.31204     0.09737    0.09737      0.31204         8167.512          0.29241
CEBUS15                                                 0.35367     0.12508    0.02771      0.19001         29.30493          0.16502
DRIVECUR    DRIVE <CURRENT SUPERVISOR>                  0.35709     0.12751    0.00243     -0.07582        -329.3525         -0.04945
PHD                                                     0.35854     0.12855    0.00104      0.06742         2016.282          0.03269
(CONSTANT)                                                                                                  27915.66

VARIABLE                                              MULTIPLE R   R SQUARE   RSQ CHANGE    SIMPLE R             B              BETA

DRIVECUR    DRIVE <CURRENT SUPERVISOR>                  0.37939     0.14394    0.14394      0.37939         2343.114          0.37158
ISH         ACADEMIC HONORS                             0.46667     0.21778    0.07384      0.25576         7881.219          0.29804
PHD                                                     0.51097     0.26109    0.04330      0.24527         13242.41          0.22678
CETCH18                                                 0.53851     0.28999    0.02891     -0.17019        -12.65700         -0.19218
IGPA        HS UNDERGRADUATE GPS <1.0-4.0>              0.55536     0.30842    0.01843      0.06445        -3695.237         -0.15825
CEBUS18                                                 0.55789     0.31124    0.00282      0.00098         7.810289          0.04966
MA                                                      0.55910     0.31259    0.00135      0.16161         1699.967          0.04249
(CONSTANT)                                                                                                  14488.33
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MULTIPLE REGRESSION - FORD
vs. OAC

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VARIABLE                                           ORC03   MULTIPLE R  R SQUARE  RSQ CHANGE  SIMPLE R          B              BETA

PHD                                                          0.26815    0.07190   0.07190     0.26815      1.407721          0.18044
ISH          ACADEMIC HONORS                                 0.32292    0.10428   0.03237    -0.17453     -1.657158         -0.27981
MA                                                           0.38748    0.15014   0.04586     0.24631      1.399382          0.23111
IGPA         BS UNDERGRADUATE GPS <1.0-4.0>                  0.41310    0.17065   0.02051     0.10030      0.8754693         0.14000
CEBUS03                                                      0.42708    0.18239   0.01174    -0.09327     -0.2013279D-01    -0.09985
DRIVECUR     DRIVE <CURRENT SUPERVISOR>                      0.43307    0.18755   0.00516     0.15539      0.1350376         0.08333
CETCH03                                                      0.43453    0.18882   0.00127     0.04084     -0.9433691D-03    -0.03995
(CONSTANT)                                                                                                -2.455925

VARIABLE                                           ORC06   MULTIPLE R  R SQUARE  RSQ CHANGE  SIMPLE R          B              BETA

CETCH06                                                      0.39933    0.15947   0.15947     0.39933      0.4370611D-02     0.40223
PHD                                                          0.46965    0.22058   0.06111     0.27064      1.414515          0.21086
DRIVECUR     DRIVE <CURRENT SUPERVISOR>                      0.53003    0.28093   0.06034    -0.19509     -0.3497878        -0.25067
CEBUS06                                                      0.55020    0.30273   0.02180     0.24071      0.1703242D-01     0.15630
IGPA         BS UNDERGRADUATE GPS <1.0-4.0>                  0.55523    0.30828   0.00555     0.11498      0.5349134         0.09934
ISH          ACADEMIC HONORS                                 0.55667    0.30988   0.00160     0.12041     -0.2413138        -0.04732
(CONSTANT)                                                                                                 2.948541

VARIABLE                                           ORC09   MULTIPLE R  R SQUARE  RSQ CHANGE  SIMPLE R          B              BETA

CETCH09                                                      0.44189    0.19527   0.19527     0.44189      0.3178140D-02     0.37363
MA                                                           0.46716    0.21823   0.02297     0.31335      1.144622          0.21962
IGPA         BS UNDERGRADUATE GPS <1.0-4.0>                  0.47877    0.22915   0.01092    -0.01083     -0.7860665        -0.14604
ISH          ACADEMIC HONORS                                 0.48483    0.23506   0.00591     0.13185      0.4689664         0.09200
CEBUS09                                                      0.49014    0.24024   0.00518     0.05428     -0.6197360D-02    -0.06884
PHD                                                          0.49192    0.24198   0.00174     0.03370     -0.3091693        -0.04604
DRIVECUR     DRIVE <CURRENT SUPERVISOR>                      0.49232    0.24238   0.00040    -0.00152     -0.2862350D-01    -0.02052
(CONSTANT)                                                                                                 2.164493

VARIABLE                                           ORC12   MULTIPLE R  R SQUARE  RSQ CHANGE  SIMPLE R          B              BETA

CETCH12                                                      0.51047    0.26058   0.26058     0.51047      0.2009418D-02     0.40533
MA                                                           0.55196    0.30466   0.04408     0.41270      0.7328924         0.21557
DRIVECUR     DRIVE <CURRENT SUPERVISOR>                      0.55805    0.31142   0.00676    -0.03169     -0.5964585D-01    -0.06555
ISH          ACADEMIC HONORS                                 0.56142    0.31519   0.00377     0.20449      0.3371072         0.10137
IGPA         BS UNDERGRADUATE GPS <1.0-4.0>                  0.56455    0.31873   0.00354     0.09156     -0.2605735        -0.07421
PHD                                                          0.56709    0.32159   0.00287     0.15691      0.2546611         0.05814
(CONSTANT)                                                                                                 0.6349751

VARIABLE                                           ORC15   MULTIPLE R  R SQUARE  RSQ CHANGE  SIMPLE R          B              BETA

CETCH15                                                      0.37991    0.14433   0.14433     0.37991      0.1707165D-02     0.33760
PHD                                                          0.41985    0.17627   0.03194     0.22976      0.5853647         0.12818
MA                                                           0.43257    0.18711   0.01084     0.32076      0.5245819         0.14800
CEBUS15                                                      0.43956    0.19322   0.00610     0.06631     -0.2366021D-02    -0.08686
DRIVECUR     DRIVE <CURRENT SUPERVISOR>                      0.44444    0.19753   0.00431    -0.02428     -0.6534719D-01    -0.06889
ISH          ACADEMIC HONORS                                 0.44623    0.19918   0.00165     0.04513     -0.1476804        -0.04260
(CONSTANT)                                                                                                -0.4829496

VARIABLE                                           ORC18   MULTIPLE R  R SQUARE  RSQ CHANGE  SIMPLE R          B              BETA

CETCH18                                                      0.43551    0.18967   0.18967     0.43551      0.1710210D-02     0.38879
PHD                                                          0.46970    0.22062   0.03095     0.24279      0.7377234         0.18215
CEBUS18                                                      0.47311    0.22383   0.00322     0.21335      0.1356474D-02     0.06674
DRIVECUR     DRIVE <CURRENT SUPERVISOR>                      0.47644    0.22699   0.00316     0.08084      0.5241580D-01     0.06231
IGPA         BS UNDERGRADUATE GPS <1.0-4.0>                  0.47944    0.22986   0.00287     0.04582     -0.1433859        -0.04417
ISH          ACADEMIC HONORS                                 0.47984    0.23025   0.00039     0.02397     -0.6993365D-01    -0.02275
(CONSTANT)                                                                                                -1.501186
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APPENDIX IIA

MULTIPLE REGRESSION - NASA
VS. ORC

APPENDIX 11B

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VARIABLE                                 JSP03   MULTIPLE R  R SQUARE  RSQ CHANGE   SIMPLE R            B              BETA

CETCH03                                           0.23475    0.05511    0.05511    -0.23475    -0.2901997D-01      -0.27261
IGPA        BS UNDERGRADUATE GPS <1.0-4.0>        0.25721    0.06616    0.01105     0.07950     1.824199            0.06470
PHD                                               0.26729    0.07145    0.00529    -0.08366    -2.840253           -0.08075
ISH         ACADEMIC HONORS                       0.27361    0.07486    0.00342     0.05648     2.027607            0.07893
CEBUS03                                           0.27775    0.07715    0.00228    -0.05416    -0.4328318D-01      -0.04761
MA                                                0.28071    0.07880    0.00165    -0.05050     1.328484            0.04866
DRIVECUR    DRIVE <CURRENT SUPERVISOR>            0.28258    0.07985    0.00106    -0.01298     0.2533196           0.03487
(CONSTANT)                                                                                     -3.196397

VARIABLE                                 JSP06   MULTIPLE R  R SQUARE  RSQ CHANGE   SIMPLE R            B              BETA

CEBUS06                                           0.43735    0.19128    0.19128     0.43735     0.1625039           0.50262
ISH         ACADEMIC HONORS                       0.52785    0.27863    0.08735    -0.23010    -4.367562           -0.28849
DRIVECUR    DRIVE <CURRENT SUPERVISOR>            0.56188    0.31571    0.03708     0.16669     0.8284184           0.19999
CETCH06                                           0.59586    0.35505    0.03934    -0.21145    -0.5233824D-02      -0.16226
IGPA        BS UNDERGRADUATE GPS <1.0-4.0>        0.60340    0.36409    0.00904    -0.00501     2.016144            0.12613
MA                                                0.60999    0.37209    0.00800    -0.10308    -1.973604           -0.12751
PHD                                               0.61269    0.37539    0.00330     0.14159     1.271591            0.06376
(CONSTANT)                                                                                     -8.865121

VARIABLE                                 JSP09   MULTIPLE R  R SQUARE  RSQ CHANGE   SIMPLE R            B              BETA

MA                                                0.29434    0.08664    0.08664    -0.29434   -67.63976           -0.37848
DRIVECUR    DRIVE <CURRENT SUPERVISOR>            0.37747    0.14248    0.05584     0.20277    12.35920             0.25840
ISH         ACADEMIC HONORS                       0.42543    0.18099    0.03851     0.09701    40.37566             0.23098
IGPA        BS UNDERGRADUATE GPS <1.0-4.0>        0.42682    0.18218    0.00118     0.00301    -8.420366           -0.04562
PHD                                               0.42828    0.18342    0.00125    -0.09294     9.830796            0.04269
CEBUS09                                           0.42903    0.18407    0.00064    -0.07351    -0.8254274D-01      -0.02674
(CONSTANT)                                                                                    -59.76337

VARIABLE                                 JSP12   MULTIPLE R  R SQUARE  RSQ CHANGE   SIMPLE R            B              BETA

DRIVECUR    DRIVE <CURRENT SUPERVISOR>            0.25543    0.06524    0.06524     0.25543    12.84294             0.30094
MA                                                0.31154    0.09705    0.03181    -0.14941   -43.54619            -0.27309
ISH         ACADEMIC HONORS                       0.38153    0.14557    0.04851     0.15476    38.42750             0.24638
CETCH12                                           0.39167    0.15341    0.00784     0.03609     0.1995778D-01       0.08583
IGPA        BS UNDERGRADUATE GPS <1.0-4.0>        0.39516    0.15615    0.00274     0.04294   -10.07425            -0.06117
CEBUS12                                           0.39612    0.15691    0.00076     0.02090     0.5112295D-01       0.03048
(CONSTANT)                                                                                    -79.23152

VARIABLE                                 JSP15   MULTIPLE R  R SQUARE  RSQ CHANGE   SIMPLE R            B              BETA

DRIVECUR    DRIVE <CURRENT SUPERVISOR>            0.21603    0.04667    0.04667     0.21603    10.63766             0.27122
ISH         ACADEMIC HONORS                       0.30367    0.09222    0.04555     0.20420    46.14708             0.32193
MA                                                0.39991    0.15993    0.06771    -0.17016   -39.00395            -0.26614
IGPA        BS UNDERGRADUATE GPS <1.0-4.0>        0.40551    0.16444    0.00451     0.04424   -12.20765            -0.08066
PHD                                               0.40587    0.16473    0.00029    -0.07173     3.472889            0.01839
(CONSTANT)                                                                                    -49.75127

VARIABLE                                 JSP18   MULTIPLE R  R SQUARE  RSQ CHANGE   SIMPLE R            B              BETA

DRIVECUR    DRIVE <CURRENT SUPERVISOR>            0.20254    0.04102    0.04102     0.20254     3.055554            0.20925
CEBUS18                                           0.27587    0.07611    0.03508     0.17835     0.1070315           0.30338
CETCH18                                           0.36256    0.13145    0.05535    -0.13459    -0.2851351D-01      -0.37344
MA                                                0.42456    0.18025    0.04880     0.13397    17.50930             0.32090
ISH         ACADEMIC HONORS                       0.43902    0.19274    0.01249    -0.09598    -5.112305           -0.09579
PHD                                               0.44585    0.19879    0.00605    -0.01122    -5.665469           -0.08059
IGPA        BS UNDERGRADUATE GPS <1.0-4.0>        0.44875    0.20137    0.00258    -0.02539    -3.397319           -0.06029
(CONSTANT)                                                                                     -8.242390
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MULTIPLE REGRESSION - NASA
VS. OSP

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VARIABLE                                OCT03     MULTIPLE R  R SQUARE  RSQ CHANGE  SIMPLE R          B                  BETA

PHD                                                0.20776    0.04317    0.04317    -0.20776    -0.6420196           -0.22270
CETCH03                                            0.27460    0.07540    0.03224    -0.19958    -0.1731357D-02       -0.19844
MA                                                 0.28835    0.08315    0.00774    -0.06374     0.2814916            0.12581
DRIVECUR    DRIVE <CURRENT SUPERVISOR>             0.29287    0.08577    0.00263    -0.09883    -0.3662087D-01       -0.06116
CEBUS03                                            0.29859    0.08915    0.00338    -0.06763    -0.4138436D-02       -0.05554
ISH         ACADEMIC HONORS                        0.30206    0.09124    0.00209    -0.06429    -0.8092971D-01       -0.03698
IGPA        BS UNDERGRADUATE GPS <1.0-4.0>         0.30274    0.09165    0.00041    -0.06706    -0.5586335D-01       -0.02418
(CONSTANT)                                                                                     3.009832

VARIABLE                                OCT06     MULTIPLE R  R SQUARE  RSQ CHANGE  SIMPLE R          B                  BETA

CETCH06                                            0.24049    0.05783    0.05783    -0.24049    -0.1204818D-02       -0.26206
CEBUS05                                            0.26875    0.07223    0.01439    -0.13100    -0.5087088D-02       -0.11039
PHD                                                0.28349    0.08037    0.00814    -0.12946    -0.3259279           -0.11466
MA                                                 0.29069    0.08450    0.00413    -0.08894     0.1359535            0.06163
ISH         ACADEMIC HONORS                        0.29460    0.08679    0.00229    -0.00598     0.7602531D-01        0.03523
IGPA        BS UNDERGRADUATE GPS <1.0-4.0>         0.29541    0.08727    0.00048     0.01132     0.6906481D-01        0.03031
DRIVECUR    DRIVE <CURRENT SUPERVISOR>             0.29614    0.08770    0.00043    -0.03361    -0.1272279D-01       -0.02155
(CONSTANT)                                                                                     2.154342

VARIABLE                                OCT09     MULTIPLE R  R SQUARE  RSQ CHANGE  SIMPLE R          B                  BETA

PHD                                                0.25891    0.06703    0.06703    -0.25891    -0.6272172           -0.24382
DRIVECUR    DRIVE <CURRENT SUPERVISOR>             0.30170    0.09102    0.02399     0.14299     0.8739436D-01        0.16356
CETCH09                                            0.32985    0.10880    0.01778    -0.14447    -0.3738596D-03       -0.11473
ISH         ACADEMIC HONORS                        0.33779    0.11410    0.00530    -0.10721    -0.9900234D-01       -0.05070
CEBUS09                                            0.33941    0.11520    0.00110    -0.12935    -0.1276036D-02       -0.03700
IGPA        BS UNDERGRADUATE GPS <1.0-4.0>         0.34082    0.11616    0.00096    -0.07818    -0.7507134D-01       -0.03641
(CONSTANT)                                                                                     1.796018

VARIABLE                                OCT12     MULTIPLE R  R SQUARE  RSQ CHANGE  SIMPLE R          B                  BETA

IGPA        BS UNDERGRADUATE GPS <1.0-4.0>         0.19940    0.03976    0.03976    -0.19940    -0.6266965           -0.27546
ISH         ACADEMIC HONORS                        0.23825    0.05676    0.01700     0.01961     0.4155432            0.19285
DRIVECUR    DRIVE <CURRENT SUPERVISOR>             0.26882    0.07226    0.01550     0.07097     0.8333429D-01        0.14135
MA                                                 0.29607    0.08766    0.01540    -0.14628    -0.2645788           -0.12010
CETCH12                                            0.29787    0.08873    0.00107    -0.08180    -0.1822614D-03       -0.05674
CEBUS12                                            0.30155    0.09093    0.00221     0.00210     0.1205615D-02        0.05202
(CONSTANT)                                                                                     3.148307

VARIABLE                                OCT15     MULTIPLE R  R SQUARE  RSQ CHANGE  SIMPLE R          B                  BETA

MA                                                 0.31378    0.09846    0.09846    -0.31378    -0.5619614           -0.26500
IGPA        BS UNDERGRADUATE GPS <1.0-4.0>         0.39019    0.15225    0.05379    -0.31207    -0.7436529           -0.34058
PHD                                                0.42119    0.17740    0.02516    -0.26786    -0.3928432           -0.14421
ISH         ACADEMIC HONORS                        0.44232    0.19565    0.01824    -0.04705     0.3497099            0.16911
DRIVECUR    DRIVE <CURRENT SUPERVISOR>             0.46029    0.21187    0.01622     0.03602     0.7666043D-01        0.13548
CETCH15                                            0.46780    0.21884    0.00697    -0.06977     0.2173414D-03        0.07205
CEBUS15                                            0.47081    0.22167    0.00283     0.02468     0.9577061D-03        0.05894
(CONSTANT)                                                                                     3.712739

VARIABLE                                OCT18     MULTIPLE R  R SQUARE  RSQ CHANGE  SIMPLE R          B                  BETA

MA                                                 0.32700    0.10693    0.10693    -0.32700    -0.9952624           -0.49822
CETCH18                                            0.43949    0.19314    0.08621     0.10607     0.1041119D-02        0.37244
ISH         ACADEMIC HONORS                        0.47041    0.22128    0.02814     0.09185     0.5556048            0.28436
IGPA        BS UNDERGRADUATE GPS <1.0-4.0>         0.51152    0.26176    0.04047    -0.18837    -0.5019822           -0.24332
CEBUS18                                            0.52285    0.27337    0.01161    -0.03678    -0.1449666D-02       -0.11223
DRIVECUR    DRIVE <CURRENT SUPERVISOR>             0.52658    0.27729    0.00392    -0.01884     0.3450253D-01        0.06454
(CONSTANT)                                                                                     3.446099
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MULTIPLE REGRESSION - NASA
VS. OCT

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VARIABLE                                      OCM03      MULTIPLE R  R SQUARE  RSQ CHANGE  SIMPLE R              B                   BETA

IGPA       BS UNDERGRADUATE GPS <1.0-4.0>                 0.27025    0.07303    0.07303    -0.27025     -0.5449258                -0.27025
CETCH03                                                   0.33620    0.11303    0.04000     0.17003      0.1160990D-02             0.15249
ISH        ACADEMIC HONORS                                0.37178    0.13822    0.02519    -0.23712     -0.3058991                -0.16918
MA                                                        0.39518    0.15617    0.01795     0.09972      0.2683165                 0.13743
DRIVECUR   DRIVE <CURRENT SUPERVISOR>                     0.40885    0.16715    0.01098     0.12466      0.5229065D-01             0.10007
CEBUS03                                                   0.41553    0.17266    0.00551    -0.09238     -0.5167630D-02            -0.07948
PHD                                                       0.41929    0.17581    0.00314     0.08777      0.1531187                 0.06087
(CONSTANT)                                                                                                4.362125

VARIABLE                                      OCM05      MULTIPLE R  R SQUARE  RSQ CHANGE  SIMPLE R              B                   BETA

CETCH05                                                   0.17167    0.02947    0.02947    -0.17167     -0.1047276D-02            -0.23187
ISH        ACADEMIC HONORS                                0.23010    0.05295    0.02348     0.11430      0.5540160                 0.26136
IGPA       BS UNDERGRADUATE GPS <1.0-4.0>                 0.26391    0.06965    0.01670    -0.06321     -0.4404865                -0.19680
DRIVECUR   DRIVE <CURRENT SUPERVISOR>                     0.28928    0.08368    0.01403     0.06104      0.6495008D-01             0.11198
CEBUS05                                                   0.29845    0.08908    0.00539    -0.06388     -0.4394616D-02            -0.09707
PHD                                                       0.30915    0.09558    0.00650     0.03625      0.1930345                 0.06913
MA                                                        0.31145    0.09702    0.00144    -0.01377      0.1010102                 0.04661
(CONSTANT)                                                                                                3.739420

VARIABLE                                      OCM09      MULTIPLE R  R SQUARE  RSQ CHANGE  SIMPLE R              B                   BETA

MA                                                        0.23130    0.05350    0.05350     0.23130      0.6156464                 0.31527
CEBUS09                                                   0.33989    0.11553    0.06203    -0.18899     -0.8228078D-02            -0.24393
PHD                                                       0.37210    0.13846    0.02293    -0.08565     -0.3859200                -0.15338
DRIVECUR   DRIVE <CURRENT SUPERVISOR>                     0.38025    0.14459    0.00613     0.11715      0.4657684D-01             0.08912
CETCH09                                                   0.38335    0.14696    0.00237     0.12418      0.1568449D-03             0.04921
ISH        ACADEMIC HONORS                                0.38497    0.14820    0.00124     0.07244      0.1200827                 0.06287
IGPA       BS UNDERGRADUATE GPS <1.0-4.0>                 0.38781    0.15040    0.00220     0.05151     -0.1123311                -0.05570
(CONSTANT)                                                                                                2.324228

VARIABLE                                      OCM12      MULTIPLE R  R SQUARE  RSQ CHANGE  SIMPLE R              B                   BETA

CEBUS12                                                   0.24213    0.05862    0.05862    -0.24213     -0.6492689D-02            -0.25771
IGPA       BS UNDERGRADUATE GPS <1.0-4.0>                 0.28564    0.08159    0.02297     0.13633      0.3647552                 0.14747
DRIVECUR   DRIVE <CURRENT SUPERVISOR>                     0.33050    0.10923    0.02764    -0.13578     -0.1127229                -0.17587
MA                                                        0.35159    0.12361    0.01438     0.08244      0.3282980                 0.13708
CETCH12                                                   0.35736    0.12770    0.00409    -0.10587     -0.2547407D-03            -0.07294
PHD                                                       0.35989    0.12952    0.00182     0.08924      0.1422712                 0.04611
(CONSTANT)                                                                                                2.700994

VARIABLE                                      OCM15      MULTIPLE R  R SQUARE  RSQ CHANGE  SIMPLE R              B                   BETA

CEBUS15                                                   0.38475    0.14803    0.14803    -0.38475     -0.1032218D-01            -0.52596
CETCH15                                                   0.48082    0.23118    0.08315     0.11067      0.1731293D-02             0.47520
MA                                                        0.56788    0.32249    0.09131    -0.21180     -0.8619465                -0.33753
ISH        ACADEMIC HONORS                                0.57693    0.33285    0.01036     0.00450      0.3817415                 0.15283
IGPA       BS UNDERGRADUATE GPS <1.0-4.0>                 0.58523    0.34249    0.00964    -0.12583     -0.2958804                -0.11219
PHD                                                       0.58564    0.34297    0.00048    -0.07208     -0.7893900D-01            -0.02399
(CONSTANT)                                                                                                3.701413

VARIABLE                                      OCM18      MULTIPLE R  R SQUARE  RSQ CHANGE  SIMPLE R              B                   BETA

CEBUS18                                                   0.40730    0.16589    0.16589    -0.40730     -0.6529860D-02            -0.42271
PHD                                                       0.48095    0.23133    0.06543    -0.26803     -0.9734545                -0.31624
IGPA       BS UNDERGRADUATE GPS <1.0-4.0>                 0.52923    0.28008    0.04875     0.15570      0.5255521                 0.21300
MA                                                        0.53634    0.28766    0.00758    -0.01452      0.2730084                 0.11427
DRIVECUR   DRIVE <CURRENT SUPERVISOR>                     0.54268    0.29451    0.00684    -0.03295     -0.5361594D-01            -0.08385
CETCH18                                                   0.54305    0.29490    0.00040    -0.15230     -0.8140305D-04            -0.02435
(CONSTANT)                                                                                                1.631617
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APPENDIX 11D

MULTIPLE REGRESSION - NASA
VS. OCM

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VARIABLE                                                MULTIPLE R  R SQUARE  RSQ CHANGE  SIMPLE R          B           BETA

CEBUS03                                                  0.47013    0.22103    0.22103    0.47013     290.5730       0.50637
PHD                                                      0.61636    0.37990    0.15887    0.44186     12567.18       0.63362
MA                                                       0.81467    0.66369    0.28379   -0.28232    -11635.63      -0.76665
ISH          ACADEMIC HONORS                             0.90471    0.81850    0.15482    0.30513     5257.159       0.34915
DRIVECUR     DRIVE <CURRENT SUPERVISOR>                  0.97605    0.95268    0.13418    0.23682     1408.891       0.34198
IGPA         BS UNDERGRADUATE GPS <1.0-4.0>              0.98866    0.97745    0.02477    0.29044     2953.646       0.18642
(CONSTANT)                                                                                          -8842.159


VARIABLE                                                MULTIPLE R  R SQUARE  RSQ CHANGE  SIMPLE R          B           BETA

IGPA         BS UNDERGRADUATE GPS <1.0-4.0>              0.41125    0.16913    0.16913    0.41125     3112.407       0.16315
PHD                                                      0.52100    0.27144    0.10231    0.36804     6660.835       0.31418
ISH          ACADEMIC HONORS                             0.57479    0.33038    0.05894    0.39674     5998.450       0.31119
CEBUS06                                                  0.61361    0.37652    0.04614   -0.08020    -80.64516      -0.23463
MA                                                       0.63149    0.39878    0.02226    0.38313     3927.587       0.23869
CETCH06                                                  0.64951    0.42187    0.02308    0.02224    -5.809082      -0.16940
DRIVECUR     DRIVE <CURRENT SUPERVISOR>                  0.64969    0.42210    0.00023    0.07537     69.12882       0.01570
(CONSTANT)                                                                                          -182.3843


VARIABLE                                                MULTIPLE R  R SQUARE  RSQ CHANGE  SIMPLE R          B           BETA

CETCH09                                                  0.54172    0.29346    0.29346    0.54172     10.42654       0.44172
MA                                                       0.57993    0.33632    0.04286    0.40366     2764.244       0.19113
ISH          ACADEMIC HONORS                             0.60271    0.36326    0.02694    0.29627     2046.933       0.14470
IGPA         BS UNDERGRADUATE GPS <1.0-4.0>              0.60710    0.36857    0.00532    0.24661     1104.623       0.07395
CEBUS09                                                  0.60923    0.37116    0.00258    0.10726    -11.28398      -0.04517
DRIVECUR     DRIVE <CURRENT SUPERVISOR>                  0.61057    0.37260    0.00164    0.09579     161.1765       0.04164
PHD                                                      0.61152    0.37395    0.00115    0.07314    -696.9796      -0.03740
(CONSTANT)                                                                                           7290.891


VARIABLE                                                MULTIPLE R  R SQUARE  RSQ CHANGE  SIMPLE R          B           BETA

CETCH12                                                  0.67012    0.44905    0.44905    0.67012     16.15697       0.50296
MA                                                       0.69591    0.48429    0.03524    0.46279     3464.905       0.15728
CEBUS12                                                  0.71155    0.50631    0.02202    0.42886     37.40779       0.16141
ISH          ACADEMIC HONORS                             0.72482    0.52536    0.01905    0.30241     2344.924       0.10882
IGPA         BS UNDERGRADUATE GPS <1.0-4.0>              0.72706    0.52864    0.00328    0.24907     1684.204       0.07403
DRIVECUR     DRIVE <CURRENT SUPERVISOR>                  0.72783    0.52973    0.00109    0.01952    -200.7181      -0.03404
(CONSTANT)                                                                                           11076.56


VARIABLE                                                MULTIPLE R  R SQUARE  RSQ CHANGE  SIMPLE R          B           BETA

CETCH15                                                  0.62663    0.39266    0.39266    0.62663     13.06730       0.44520
MA                                                       0.68483    0.46899    0.07634    0.53972     5125.803       0.24915
PHD                                                      0.70226    0.49317    0.02418    0.32719     4536.428       0.17114
CEBUS15                                                  0.70933    0.50314    0.00997    0.32387     17.35777       0.10978
ISH          ACADEMIC HONORS                             0.71082    0.50526    0.00212    0.11899    -1733.247      -0.08613
IGPA         BS UNDERGRADUATE GPS <1.0-4.0>              0.71342    0.50897    0.00371    0.21138     1718.108       0.08086
DRIVECUR     DRIVE <CURRENT SUPERVISOR>                  0.71472    0.51082    0.00185    0.02296    -244.3419      -0.04438
(CONSTANT)                                                                                           13567.15


VARIABLE                                                MULTIPLE R  R SQUARE  RSQ CHANGE  SIMPLE R          B           BETA

CETCH18                                                  0.61535    0.37865    0.37865    0.61535     23.68153       0.62382
PHD                                                      0.65178    0.42481    0.04616    0.30975     8090.286       0.23146
ISH          ACADEMIC HONORS                             0.66003    0.43565    0.01083   -0.00427    -1679.070      -0.06328
DRIVECUR     DRIVE <CURRENT SUPERVISOR>                  0.66613    0.44373    0.00808    0.13404     750.6116       0.10339
IGPA         BS UNDERGRADUATE GPS <1.0-4.0>              0.66872    0.44719    0.00346    0.03905    -1770.433      -0.06319
MA                                                       0.66948    0.44820    0.00101    0.31036    -1131.430      -0.04171
CEBUS18                                                  0.66995    0.44883    0.00063    0.19999    -4.780469      -0.02725
(CONSTANT)                                                                                           20256.67
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APPENDIX 11E

MULTIPLE REGRESSION - NASA
vs. OAC

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VARIABLE                                     MULTIPLE R  R SQUARE  RSQ CHANGE  SIMPLE R            B                BETA
                            ORC03
MA                                            0.27046    0.07315   0.07315     0.27046     1.387783              0.27968
IGPA        BS UNDERGRADUATE GPS <1.0-4.0>    0.46512    0.21634   0.14319    -0.25432    -2.159335             -0.52311
ISH         ACADEMIC HONORS                   0.53234    0.28339   0.06704     0.21686     1.594210              0.36294
CFBUS03                                       0.57689    0.33280   0.04942    -0.19142    -0.3600340D-01        -0.24520
DRIVECUR    DRIVE <CURRENT SUPERVISOR>        0.60083    0.36100   0.02820     0.15931     0.1947008             0.17342
PHD                                           0.60163    0.36195   0.00095     0.0        -0.4389397            -0.03274
(CONSTANT)                                                                                  5.154095

VARIABLE                                     MULTIPLE R  R SQUARE  RSQ CHANGE  SIMPLE R            B                BETA
                                  ORC06
PHD                                           0.30418    0.09252   0.09252     0.30418     3.287399              0.29542
CFTCH06                                       0.37339    0.13942   0.04689    -0.23200    -0.4119905D-02        -0.25147
IGPA        BS UNDERGRADUATE GPS <1.0-4.0>    0.42775    0.18297   0.04355    -0.12181    -0.8642199            -0.25222
MA                                            0.45911    0.21078   0.02781     0.14533     0.8323344             0.20208
CFBUS06                                       0.47247    0.22323   0.01245     0.10411     0.5854362D-02         0.12096
ISH         ACADEMIC HONORS                   0.47479    0.22543   0.00220    -0.07294    -0.2135181            -0.05856
DRIVECUR    DRIVE <CURRENT SUPERVISOR>        0.47620    0.22677   0.00134     0.04298     0.3488774D-01         0.03744
(CONSTANT)                                                                                  3.638940

VARIABLE                                     MULTIPLE R  R SQUARE  RSQ CHANGE  SIMPLE R            B                BETA
                              ORC09
ISH         ACADEMIC HONORS                   0.23698    0.05616   0.05616     0.23698     1.288983              0.43515
MA                                            0.42416    0.17991   0.12375    -0.22383    -1.272642             -0.38032
IGPA        BS UNDERGRADUATE GPS <1.0-4.0>    0.43108    0.18583   0.00592    -0.03564    -0.3282742            -0.11793
PHD                                           0.43892    0.19265   0.00682     0.0         0.7205903             0.07971
CFTCH09                                       0.44321    0.19644   0.00379    -0.04787    -0.9005369D-03        -0.07165
DRIVECUR    DRIVE <CURRENT SUPERVISOR>        0.44563    0.19859   0.00215     0.03085     0.3695046D-01         0.04882
CFBUS09                                       0.44625    0.19914   0.00055     0.07191     0.7300850D-03         0.02436
(CONSTANT)                                                                                  1.097925

VARIABLE                                     MULTIPLE R  R SQUARE  RSQ CHANGE  SIMPLE R            B                BETA
                              ORC12
CFTCH12                                       0.42044    0.17677   0.17677     0.42044     0.6609075D-02         0.43241
ISH         ACADEMIC HONORS                   0.49861    0.24862   0.07184     0.33280     0.8501561             0.21728
DRIVECUR    DRIVE <CURRENT SUPERVISOR>        0.54576    0.29786   0.04924    -0.15400    -0.2368075            -0.23679
IGPA        BS UNDERGRADUATE GPS <1.0-4.0>    0.57855    0.33472   0.03686     0.22371     0.9100839             0.24751
MA                                            0.58467    0.34184   0.00713     0.12284    -0.4313352            -0.09759
CFBUS12                                       0.58801    0.34575   0.00391     0.19255     0.1698882D-02         0.06457
(CONSTANT)                                                                                 -0.8353535

VARIABLE                                     MULTIPLE R  R SQUARE  RSQ CHANGE  SIMPLE R            B                BETA
                                   ORC15
CFBUS15                                       0.25394    0.06448   0.06448     0.25394     0.5550045D-02         0.21470
DRIVECUR    DRIVE <CURRENT SUPERVISOR>        0.27525    0.07577   0.01128    -0.12367    -0.1348184            -0.13249
IGPA        BS UNDERGRADUATE GPS <1.0-4.0>    0.30028    0.09017   0.01440     0.10341     0.5772507             0.15429
CFTCH15                                       0.32102    0.10305   0.01298     0.15127     0.1921290D-02         0.12924
MA                                            0.32371    0.10479   0.00174     0.03490    -0.2093164            -0.04654
(CONSTANT)                                                                                 -0.5292835

VARIABLE                                     MULTIPLE R  R SQUARE  RSQ CHANGE  SIMPLE R            B                BETA
                                        ORC18
IGPA        BS UNDERGRADUATE GPS <1.0-4.0>    0.22369    0.05004   0.05004    -0.22369    -0.6713929            -0.17716
DRIVECUR    DRIVE <CURRENT SUPERVISOR>        0.27745    0.07698   0.02695    -0.19802    -0.1776394            -0.17234
CFTCH18                                       0.32544    0.10591   0.02893     0.18706     0.2815333D-02         0.19576
MA                                            0.34577    0.11955   0.01364    -0.16285    -0.8071665            -0.17718
ISH         ACADEMIC HONORS                   0.35954    0.12927   0.00971    -0.01662     0.4977957             0.12344
PHD                                           0.36548    0.13357   0.00431    -0.03878     0.8397013             0.06822
CFBUS18                                       0.36593    0.13391   0.00033     0.03177    -0.4608709D-03        -0.01961
(CONSTANT)                                                                                  3.700332
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APPENDIX 12A

MULTIPLE REGRESSION - FMC
VS. ORC

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VARIABLE                       OSP03          MULTIPLE R  R SQUARE  RSQ CHANGE  SIMPLE R            B                 BETA

DRIVECUR  DRIVE <CURRENT SUPERVISOR>           0.34914    0.12190    0.12190    0.34914       1.019000            0.41268
ISH       ACADEMIC HONORS                      0.48315    0.23344    0.11154   -0.28271      -2.147281           -0.22227
IGPA      BS UNDERGRADUATE GPS <1.0-4.0>       0.50633    0.25637    0.02293   -0.21856      -1.825003           -0.20102
CETCH03                                        0.51712    0.26742    0.01105   -0.14268     -0.7775328D-02       -0.11132
CEBUS03                                        0.51990    0.27029    0.00287   -0.07631     -0.1739708D-01       -0.05387
PHD                                            0.52043    0.27085    0.00055    0.0          0.7172698            0.02433
(CONSTANT)                                                                                  -1.705116

VARIABLE                       OSP06          MULTIPLE R  R SQUARE  RSQ CHANGE  SIMPLE R            B                 BETA

IGPA      BS UNDERGRADUATE GPS <1.0-4.0>       0.27804    0.07730    0.07730    0.27804      10.38958             0.25877
DRIVECUR  DRIVE <CURRENT SUPERVISOR>           0.32147    0.10334    0.02604   -0.11452      -1.797819           -0.16463
PHD                                            0.33741    0.11384    0.01050   -0.04601     -18.83358            -0.14443
MA                                             0.35979    0.12945    0.01560    0.17506       7.133232            0.14780
CETCH06                                        0.37581    0.14123    0.01179   -0.10795     -0.2264814D-01       -0.11797
ISH       ACADEMIC HONORS                      0.37747    0.14248    0.00125    0.15250       1.801593            0.04217
(CONSTANT)                                                                                  -7.816260

VARIABLE                       OSP09          MULTIPLE R  R SQUARE  RSQ CHANGE  SIMPLE R            B                 BETA

DRIVECUR  DRIVE <CURRENT SUPERVISOR>           0.12132    0.01472    0.01472    0.12132       3.144942            0.14447
ISH       ACADEMIC HONORS                      0.17951    0.03222    0.01751   -0.11434     -10.70549            -0.12570
CETCH09                                        0.20812    0.04331    0.01109   -0.11370     -0.2986924D-01       -0.08266
IGPA      BS UNDERGRADUATE GPS <1.0-4.0>       0.21827    0.04764    0.00433    0.03941       7.756396            0.09691
MA                                             0.23221    0.05392    0.00628   -0.09733      -8.706054           -0.09049
(CONSTANT)                                                                                 -38.53126

VARIABLE                       OSP12          MULTIPLE R  R SQUARE  RSQ CHANGE  SIMPLE R            B                 BETA

CEBUS12                                        0.31841    0.10138    0.10138    0.31841       0.1224154           0.34657
MA                                             0.33699    0.11356    0.01218   -0.08698      -5.540396           -0.09336
IGPA      BS UNDERGRADUATE GPS <1.0-4.0>       0.35288    0.12453    0.01097    0.05163       7.725392            0.15649
ISH       ACADEMIC HONORS                      0.36721    0.13484    0.01031   -0.04736      -5.762961           -0.10971
DRIVECUR  DRIVE <CURRENT SUPERVISOR>           0.37564    0.14110    0.00626   -0.10830      -1.026009           -0.07641
CETCH12                                        0.37722    0.14230    0.00119   -0.02778     -0.8231464D-02       -0.04011
PHD                                            0.37897    0.14362    0.00132   -0.06401      -6.212170           -0.03875
(CONSTANT)                                                                                  -1.992582

VARIABLE                       OSP15          MULTIPLE R  R SQUARE  RSQ CHANGE  SIMPLE R            B                 BETA

CEBUS15                                        0.31492    0.09918    0.09918    0.31492      0.9300638D-01        0.35989
MA                                             0.35630    0.12695    0.02777   -0.13548     -10.18372            -0.22649
IGPA      BS UNDERGRADUATE GPS <1.0-4.0>       0.41315    0.17069    0.04375    0.13682       9.269039            0.24781
DRIVECUR  DRIVE <CURRENT SUPERVISOR>           0.43182    0.18647    0.01578    0.09589       1.380997            0.13575
ISH       ACADEMIC HONORS                      0.43846    0.19224    0.00577    0.00638      -3.694463           -0.09282
PHD                                            0.44175    0.19514    0.00290   -0.08365      -6.958461           -0.05728
(CONSTANT)                                                                                 -30.29307

VARIABLE                       OSP18          MULTIPLE R  R SQUARE  RSQ CHANGE  SIMPLE R            B                 BETA

CEBUS18                                        0.26720    0.07139    0.07139    0.26720      0.6254424D-01        0.25144
MA                                             0.36775    0.13524    0.06385   -0.20674     -19.05107            -0.39511
IGPA      BS UNDERGRADUATE GPS <1.0-4.0>       0.42105    0.17728    0.04204    0.11957      10.30034             0.25679
CETCH18                                        0.47267    0.22342    0.04614    0.18852      0.3389841D-01        0.22269
DRIVECUR  DRIVE <CURRENT SUPERVISOR>           0.47643    0.22699    0.00357    0.02545       0.6638671           0.06085
PHD                                            0.47721    0.22773    0.00074   -0.10645      -3.740977           -0.02872
ISH       ACADEMIC HONORS                      0.47773    0.22819    0.00046    0.07874       1.103893            0.02586
(CONSTANT)                                                                                 -25.32219
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MULTIPLE REGRESSION - FMC
VS. OSP

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VARIABLE                                          MULTIPLE R  R SQUARE  RSQ CHANGE  SIMPLE R          B              BETA
                                            OCR
DRIVECUR  DRIVE <CURRENT SUPERVISOR>               0.27289   0.07447   0.07447    0.27289    0.3909188D-01      0.26012
CEBUS03                                            0.30873   0.09531   0.02084    0.16702    0.2274123D-02      0.11570
CETCH03                                            0.32273   0.10416   0.00884    0.09031    0.3848812D-03      0.09053
IGPA      BS UNDERGRADUATE GPS <1.0-4.0>           0.33022   0.10903   0.00488    0.10922    0.4367607D-01      0.07904
MA                                                 0.34027   0.11578   0.00675   -0.01069   -0.6955848D-01     -0.10472
ISH       ACADEMIC HONORS                          0.34756   0.12079   0.00501    0.15113    0.5070189D-01      0.08623
PHD                                                0.34931   0.12202   0.00122   -0.02015   -0.6670190D-01     -0.03717
(CONSTANT)                                                                                   0.3534422D-02

VARIABLE                                          MULTIPLE R  R SQUARE  RSQ CHANGE  SIMPLE R          B              BETA
                                            OCR
DRIVECUR  DRIVE <CURRENT SUPERVISOR>               0.27289   0.07447   0.07447    0.27289    0.3923336D-01      0.26106
CEBUS06                                            0.29776   0.08866   0.01419    0.12738    0.7861125D-03      0.10072
ISH       ACADEMIC HONORS                          0.31333   0.09817   0.00951    0.15113    0.5911166D-01      0.10054
MA                                                 0.32822   0.10773   0.00955   -0.01069   -0.7906430D-01     -0.11903
CETCH06                                            0.33490   0.11216   0.00443    0.09519    0.2066537D-03      0.07822
IGPA      BS UNDERGRADUATE GPS <1.0-4.0>           0.34191   0.11690   0.00474    0.10922    0.4749915D-01      0.08596
PHD                                                0.34368   0.11812   0.00122   -0.02015   -0.6654185D-01     -0.03708
(CONSTANT)                                                                                  -0.8650944D-02

VARIABLE                                          MULTIPLE R  R SQUARE  RSQ CHANGE  SIMPLE R          B              BETA
                                            OCR
DRIVECUR  DRIVE <CURRENT SUPERVISOR>               0.27289   0.07447   0.07447    0.27289    0.4122164D-01      0.27429
CEBUS09                                            0.32558   0.10600   0.03154    0.16848    0.9941444D-03      0.16712
ISH       ACADEMIC HONORS                          0.33622   0.11304   0.00704    0.15113    0.6082546D-01      0.10345
MA                                                 0.35222   0.12406   0.01102   -0.01069   -0.8103858D-01     -0.12201
IGPA      BS UNDERGRADUATE GPS <1.0-4.0>           0.35823   0.12833   0.00427    0.10922    0.4473903D-01      0.08097
PHD                                                0.35991   0.12953   0.00121   -0.02015   -0.6613236D-01     -0.03685
(CONSTANT)                                                                                  -0.2017169D-01

VARIABLE                                          MULTIPLE R  R SQUARE  RSQ CHANGE  SIMPLE R          B              BETA
                                            OCR
DRIVECUR  DRIVE <CURRENT SUPERVISOR>               0.27289   0.07447   0.07447    0.27289    0.4210420D-01      0.28016
CEBUS12                                            0.32963   0.10866   0.03419    0.16873    0.7001963D-03      0.17711
ISH       ACADEMIC HONORS                          0.34043   0.11589   0.00723    0.15113    0.6452775D-01      0.10975
MA                                                 0.35843   0.12847   0.01258   -0.01069   -0.8619942D-01     -0.12978
IGPA      BS UNDERGRADUATE GPS <1.0-4.0>           0.36345   0.13211   0.00364    0.10922    0.4108372D-01      0.07435
PHD                                                0.36484   0.13311   0.00100   -0.02015   -0.6034288D-01     -0.03363
(CONSTANT)                                                                                  -0.1945565D-01

VARIABLE                                          MULTIPLE R  R SQUARE  RSQ CHANGE  SIMPLE R          B              BETA
                                            OCR
DRIVECUR  DRIVE <CURRENT SUPERVISOR>               0.27289   0.07447   0.07447    0.27289    0.4245239D-01      0.28255
CEBUS15                                            0.33626   0.11307   0.03860    0.17595    0.6883016D-03      0.18029
MA                                                 0.34485   0.11893   0.00585   -0.01069   -0.9314646D-01     -0.14024
ISH       ACADEMIC HONORS                          0.36273   0.13157   0.01264    0.15113    0.5542190D-01      0.09596
IGPA      BS UNDERGRADUATE GPS <1.0-4.0>           0.36763   0.13515   0.00359    0.10922    0.4491722D-01      0.08129
CETCH15                                            0.36909   0.13623   0.00108    0.07333    0.7282755D-04      0.03317
PHD                                                0.36994   0.13686   0.00063   -0.02015   -0.4802771D-01     -0.02676
(CONSTANT)                                                                                  -0.3829909D-01

VARIABLE                                          MULTIPLE R  R SQUARE  RSQ CHANGE  SIMPLE R          B              BETA
                                            UCR
DRIVECUR  DRIVE <CURRENT SUPERVISOR>               0.27289   0.07447   0.07447    0.27289    0.4438207D-01      0.29532
CEBUS18                                            0.36251   0.13141   0.05694    0.21544    0.8093311D-03      0.23619
MA                                                 0.37553   0.14102   0.00961   -0.01069   -0.9874415D-01     -0.14866
ISH       ACADEMIC HONORS                          0.38738   0.15006   0.00904    0.15113    0.4963739D-01      0.08442
IGPA      BS UNDERGRADUATE GPS <1.0-4.0>           0.39137   0.15317   0.00311    0.10922    0.3576100D-01      0.06653
PHD                                                0.39172   0.15345   0.00027   -0.02015   -0.3172623D-01     -0.01768
(CONSTANT)                                                                                  -0.3493034D-01
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APPENDIX 12C

MULTIPLE REGRESSION - FMC
VS. OCR

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VARIABLE                              OCT03       MULTIPLE R  R SQUARE  RSQ CHANGE  SIMPLE R           B                  BETA

ISH        ACADEMIC HONORS                          0.31879    0.10163    0.10163   -0.31879    -0.6268731            -0.32766
MA                                                  0.36856    0.13584    0.03421    0.03813     0.4723612             0.21856
DRIVECUR   DRIVE <CURRENT SUPERVISOR>               0.38851    0.15094    0.01510   -0.14417    -0.5444466D-01        -0.11134
CEBUS03                                             0.39919    0.15935    0.00841   -0.19578    -0.6323361D-02        -0.09887
IGPA       BS UNDERGRADUATE GPS <1.0-4.0>           0.40569    0.16458    0.00523   -0.17210    -0.1598636            -0.08891
CETCH03                                             0.40658    0.16531    0.00073   -0.06466    -0.3877181D-03        -0.02803
(CONSTANT)                                                                                        3.583938

VARIABLE                              OCT06       MULTIPLE R  R SQUARE  RSQ CHANGE  SIMPLE R           B                  BETA

IGPA       BS UNDERGRADUATE GPS <1.0-4.0>           0.23695    0.05614    0.05614   -0.23695    -0.3105716            -0.15971
CEBUS06                                             0.31672    0.10031    0.04417    0.22379     0.5674841D-02         0.20660
MA                                                  0.35367    0.12508    0.02477   -0.23640    -0.4067782            -0.17402
CETCH05                                             0.35491    0.12596    0.00088    0.02481     0.2795654D-03         0.03007
(CONSTANT)                                                                                        3.489709

VARIABLE                              OCT09       MULTIPLE R  R SQUARE  RSQ CHANGE  SIMPLE R           B                  BETA

DRIVECUR   DRIVE <CURRENT SUPERVISOR>               0.32006    0.10244    0.10244   -0.32006    -0.1597871            -0.29717
IGPA       BS UNDERGRADUATE GPS <1.0-4.0>           0.38144    0.14550    0.04306   -0.25631    -0.5779741            -0.29235
ISH        ACADEMIC HONORS                          0.41639    0.17338    0.02788    0.01898     0.5850765             0.27812
MA                                                  0.44163    0.19504    0.02166   -0.20648    -0.4665970            -0.19634
CEBUS09                                             0.46432    0.21559    0.02055   -0.08381    -0.3048330D-02        -0.14322
PHD                                                 0.47735    0.22785    0.01227    0.0         0.7550396             0.11760
(CONSTANT)                                                                                        5.716757

VARIABLE                              OCT12       MULTIPLE R  R SQUARE  RSQ CHANGE  SIMPLE R           B                  BETA

DRIVECUR   DRIVE <CURRENT SUPERVISOR>               0.29938    0.08963    0.08963   -0.29938    -0.2008278            -0.31135
CEBUS12                                             0.33586    0.11281    0.02319   -0.13459    -0.2694864D-02        -0.15881
ISH        ACADEMIC HONORS                          0.33831    0.11445    0.00165   -0.02670     0.1542593             0.06113
MA                                                  0.33932    0.11514    0.00069   -0.06806    -0.9622570D-01        -0.03375
PHD                                                 0.34059    0.11600    0.00086    0.0         0.2610407             0.03389
IGPA       BS UNDERGRADUATE GPS <1.0-4.0>           0.34121    0.11643    0.00043   -0.04910    -0.5677210D-01        -0.02394
(CONSTANT)                                                                                        4.639013

VARIABLE                              OCT15       MULTIPLE R  R SQUARE  RSQ CHANGE  SIMPLE R           B                  BETA

DRIVECUR   DRIVE <CURRENT SUPERVISOR>               0.33196    0.11020    0.11020   -0.33196    -0.2116296            -0.32433
PHD                                                 0.36375    0.13232    0.02213   -0.18246    -1.053775             -0.13525
ISH        ACADEMIC HONORS                          0.38292    0.14663    0.01431    0.05578     0.4867794             0.19068
MA                                                  0.39162    0.15337    0.00674   -0.12336    -0.2279270            -0.07903
IGPA       BS UNDERGRADUATE GPS <1.0-4.0>           0.39558    0.15648    0.00311   -0.09895    -0.1661822            -0.06927
CEBUS15                                             0.39915    0.15932    0.00284    0.00474    -0.9118942D-03        -0.05501
(CONSTANT)                                                                                        5.033978

VARIABLE                              OCT18       MULTIPLE R  R SQUARE  RSQ CHANGE  SIMPLE R           B                  BETA

DRIVECUR   DRIVE <CURRENT SUPERVISOR>               0.45246    0.20472    0.20472   -0.45246    -0.3246036            -0.50595
ISH        ACADEMIC HONORS                          0.55607    0.30921    0.10449    0.25786     1.047424              0.41729
CETCH18                                             0.58431    0.34142    0.03221   -0.14060    -0.1650685D-02        -0.18440
CEBUS18                                             0.60075    0.36090    0.01948   -0.04639    -0.2307751D-02        -0.15776
IGPA       BS UNDERGRADUATE GPS <1.0-4.0>           0.60738    0.36891    0.00802    0.01495    -0.2550262            -0.10854
PHD                                                 0.61023    0.37238    0.00345   -0.06083    -0.6193272            -0.08084
MA                                                  0.61461    0.37774    0.00537    0.05349     0.2479577             0.08745
(CONSTANT)                                                                                        6.178679
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APPENDIX 12D

MULTIPLE REGRESSION - FMC
VS. OCT

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VARIABLE                                    OCM03     MULTIPLE R   R SQUARE   RSQ CHANGE   SIMPLE R          B                 BETA

DRIVECUR   DRIVE <CURRENT SUPERVISOR>                   0.36343     0.13208    0.13208     -0.36343    -0.2115381          -0.39160
MA                                                      0.50955     0.25964    0.12756      0.29507     1.215661            0.50919
IGPA       HS UNDERGRADUATE GPS <1.0-4.0>               0.55852     0.31195    0.05231     -0.14806    -0.3743117          -0.18847
ISH        ACADEMIC HONORS                              0.57085     0.32587    0.01393     -0.07985    -0.3501272          -0.16567
CEBUS03                                                 0.57437     0.32990    0.00402     -0.03959     0.4705954D-02       0.06661
PHD                                                     0.57601     0.33179    0.00190      0.0        -0.2911872          -0.04814
CETCH03                                                 0.57644     0.33228    0.00049      0.05288     0.35141100D-03      0.02300
(CONSTANT)                                                                                               7.111076

VARIABLE                                    OCM06     MULTIPLE R   R SQUARE   RSQ CHANGE   SIMPLE R          B                 BETA

DRIVECUR   DRIVE <CURRENT SUPERVISOR>                   0.24427     0.05967    0.05967     -0.24427    -0.1627320          -0.25178
PHD                                                     0.29211     0.08533    0.02566     -0.18471    -1.545084           -0.20020
MA                                                      0.35110     0.12327    0.03794      0.09974     0.6171499           0.21604
CETCH06                                                 0.36642     0.13426    0.01099      0.12802     0.1107590D-02       0.09748
IGPA       HS UNDERGRADUATE GPS <1.0-4.0>               0.37289     0.13905    0.00479     -0.09039    -0.1751739          -0.07372
CEBUS06                                                 0.37505     0.14067    0.00162      0.03701     0.1354096D-02       0.04034
(CONSTANT)                                                                                               5.341969

VARIABLE                                    OCM09     MULTIPLE R   R SQUARE   RSQ CHANGE   SIMPLE R          B                 BETA

DRIVECUR   DRIVE <CURRENT SUPERVISOR>                   0.30688     0.09418    0.09418     -0.30688    -0.2294300          -0.34141
CEBUS09                                                 0.41436     0.17169    0.07752     -0.26814    -0.6944286D-02      -0.26106
MA                                                      0.44465     0.19771    0.02602      0.39711     0.5926109           0.19953
ISH        ACADEMIC HONORS                              0.46498     0.21621    0.01850     -0.15186    -0.5290973          -0.20124
IGPA       HS UNDERGRADUATE GPS <1.0-4.0>               0.47321     0.22393    0.00772      0.05044     0.3003393           0.12156
CETCH09                                                 0.47822     0.22869    0.00476     -0.01601     0.7797331D-03       0.06990
PHD                                                     0.47929     0.22972    0.00103      0.0        -0.2739776          -0.03414
(CONSTANT)                                                                                               4.582862

VARIABLE                                    OCM12     MULTIPLE R   R SQUARE   RSQ CHANGE   SIMPLE R          B                 BETA

CETCH12                                                 0.21522     0.04632    0.04632     -0.21522    -0.2088274D-02      -0.17998
IGPA       HS UNDERGRADUATE GPS <1.0-4.0>               0.27480     0.07551    0.02919      0.19174     0.4654252           0.16674
CEBUS12                                                 0.31812     0.10120    0.02569     -0.19767    -0.3586293D-02      -0.17956
DRIVECUR   DRIVE <CURRENT SUPERVISOR>                   0.33840     0.11452    0.01332     -0.08838    -0.9275375D-01      -0.12217
MA                                                      0.34874     0.12162    0.00710      0.08816     0.3845317           0.11460
PHD                                                     0.35651     0.12710    0.00548      0.0        -0.7152376          -0.07890
(CONSTANT)                                                                                               2.508928

VARIABLE                                    OCM15     MULTIPLE R   R SQUARE   RSQ CHANGE   SIMPLE R          B                 BETA

PHD                                                     0.28592     0.08175    0.08175      0.28592     2.965018            0.37996
IGPA       HS UNDERGRADUATE GPS <1.0-4.0>               0.36945     0.13649    0.05474     -0.16144    -0.5204314          -0.21659
DRIVECUR   DRIVE <CURRENT SUPERVISOR>                   0.39953     0.15963    0.02313     -0.15293    -0.1036118          -0.15854
CEBUS15                                                 0.42268     0.17866    0.01903     -0.14657    -0.2416477D-02      -0.14556
MA                                                      0.43919     0.19289    0.01423     -0.11993    -0.4849413          -0.16789
ISH        ACADEMIC HONORS                              0.45179     0.20412    0.01123     -0.04120     0.3228554           0.12627
(CONSTANT)                                                                                               5.291947

VARIABLE                                    OCM18     MULTIPLE R   R SQUARE   RSQ CHANGE   SIMPLE R          B                 BETA

CEBUS18                                                 0.29252     0.08557    0.08557     -0.29252    -0.3976318D-02      -0.26111
CETCH18                                                 0.34880     0.12166    0.03609     -0.25919    -0.2349443D-02      -0.25211
IGPA       HS UNDERGRADUATE GPS <1.0-4.0>               0.38389     0.14737    0.02571     -0.15261    -0.7568247          -0.30819
ISH        ACADEMIC HONORS                              0.44087     0.19437    0.04699      0.02477     0.6456374           0.24708
PHD                                                     0.47985     0.23027    0.03590      0.18260     1.586241            0.19890
DRIVECUR   DRIVE <CURRENT SUPERVISOR>                   0.48282     0.23311    0.00285     -0.03495    -0.3659664D-01      -0.05479
(CONSTANT)                                                                                               5.152269
```

APPENDIX 12E

MULTIPLE REGRESSION - FMC
VS. OCM

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VARIABLE                                             MULTIPLE R   R SQUARE   RSQ CHANGE   SIMPLE R            B          BETA

CETCH03                                                 0.38461    0.14793    0.14793      0.38461      47.64139      0.44626
IGPA       BS UNDERGRADUATE GPS <1.0-4.0>               0.52650    0.27720    0.12927      0.32506      6484.657      0.46734
DRIVECUR   DRIVE <CURRENT SUPERVISOR>                   0.57461    0.33017    0.05297     -0.17456     -872.9875     -0.23132
CEBUS03                                                 0.60089    0.36107    0.03090      0.17242      90.92475      0.18422
MA                                                      0.61217    0.37476    0.01369      0.01694     -1727.001     -0.10384
ISH        ACADEMIC HONORS                              0.61607    0.37954    0.00478      0.16793     -1266.028     -0.08574
(CONSTANT)                                                                                               9771.818

VARIABLE                                             MULTIPLE R   R SQUARE   RSQ CHANGE   SIMPLE R            B          BETA

DRIVECUR   DRIVE <CURRENT SUPERVISOR>                   0.43614    0.19022    0.19022      0.43614      1570.872      0.41822
PHD                                                     0.54435    0.29632    0.10610      0.36932      19936.50      0.34786
CEBUS06                                                 0.63073    0.39782    0.10150      0.32178      67.90693      0.34014
IGPA       BS UNDERGRADUATE GPS <1.0-4.0>               0.66126    0.43726    0.03944     -0.06875     -2760.205     -0.18115
MA                                                      0.67397    0.45424    0.01697      0.21143      3125.258      0.18385
ISH        ACADEMIC HONORS                              0.68686    0.47178    0.01754     -0.01271     -2639.366     -0.17850
CETCH06                                                 0.69049    0.47677    0.00499      0.08653      4.966494      0.07349
(CONSTANT)                                                                                               10489.68

VARIABLE                                             MULTIPLE R   R SQUARE   RSQ CHANGE   SIMPLE R            B          BETA

IGPA       BS UNDERGRADUATE GPS <1.0-4.0>               0.42768    0.18291    0.18291     -0.42768     -9749.775     -0.48372
CEBUS09                                                 0.58177    0.33845    0.15555      0.41459      82.15687      0.37861
DRIVECUR   DRIVE <CURRENT SUPERVISOR>                   0.68742    0.47254    0.13409      0.28250      1867.247      0.34861
CETCH09                                                 0.70900    0.50266    0.03014      0.31364      15.56038      0.17099
MA                                                      0.71626    0.51306    0.01038      0.02899      2533.621      0.10457
PHD                                                     0.71999    0.51839    0.00532      0.0          4995.616      0.07632
ISH        ACADEMIC HONORS                              0.72121    0.52015    0.00176     -0.06764     -1085.028     -0.06659
(CONSTANT)                                                                                               30205.26

VARIABLE                                             MULTIPLE R   R SQUARE   RSQ CHANGE   SIMPLE R            B          BETA

CETCH12                                                 0.41009    0.16817    0.16817      0.41009      33.24399      0.38687
DRIVECUR   DRIVE <CURRENT SUPERVISOR>                   0.53417    0.28533    0.11716      0.37192      2230.242      0.39636
MA                                                      0.58402    0.34108    0.05575     -0.10954     -6301.259     -0.25337
CEBUS12                                                 0.61221    0.37480    0.03372      0.21967      26.22551      0.19067
PHD                                                     0.61627    0.37976    0.00496      0.0          5498.229      0.08183
IGPA       BS UNDERGRADUATE GPS <1.0-4.0>               0.61911    0.38329    0.00351     -0.11721     -1355.834     -0.06883
(CONSTANT)                                                                                              -167.2213

VARIABLE                                             MULTIPLE R   R SQUARE   RSQ CHANGE   SIMPLE R            B          BETA

CEBUS15                                                 0.52077    0.27120    0.27120      0.52077      65.06009      0.45984
MA                                                      0.57260    0.32787    0.05667     -0.16670     -10413.63     -0.42287
CETCH15                                                 0.62986    0.39673    0.06886      0.34145      29.26198      0.38887
IGPA       BS UNDERGRADUATE GPS <1.0-4.0>               0.68846    0.47398    0.07725      0.12224      6449.481      0.31482
DRIVECUR   DRIVE <CURRENT SUPERVISOR>                   0.71121    0.50582    0.03184     -0.20635     -1047.566     -0.18801
PHD                                                     0.71996    0.51834    0.01252      0.0          7944.915      0.11941
(CONSTANT)                                                                                               10552.23

VARIABLE                                             MULTIPLE R   R SQUARE   RSQ CHANGE   SIMPLE R            B          BETA

CEBUS18                                                 0.67309    0.45305    0.45305      0.67309      89.40846      0.64871
DRIVECUR   DRIVE <CURRENT SUPERVISOR>                   0.71052    0.50485    0.05180     -0.28203     -1457.835     -0.24117
CETCH18                                                 0.73344    0.53793    0.03308     -0.01224     -17.19785     -0.20381
ISH        ACADEMIC HONORS                              0.75576    0.57117    0.03324      0.29350      4753.745      0.20101
PHD                                                     0.76411    0.58386    0.01269     -0.14112     -8276.822     -0.11467
IGPA       BS UNDERGRADUATE GPS <1.0-4.0>               0.76445    0.58439    0.00053      0.11495      681.1120      0.03865
MA                                                      0.76461    0.58463    0.00024      0.06642     -493.3104     -0.01846
(CONSTANT)                                                                                               34515.80
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APPENDIX 12F

MULTIPLE REGRESSION - FMC
vs. OAC

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VARIABLE                                                  MULTIPLE R  R SQUARE  RSQ CHANGE  SIMPLE R            B                 BETA
                                            ORC03
DRIVECUR    DRIVE <CURRENT SUPERVISOR>                     0.29082    0.08458    0.08458   -0.29082    -0.3815627          -0.29763
IGPA        BS UNDERGRADUATE GPS <1.0-4.0>                 0.42572    0.18124    0.09666    0.26854     2.119922            0.46699
MA                                                         0.54741    0.29966    0.11842   -0.24717    -2.206537           -0.42135
CFTCH03                                                    0.59655    0.35587    0.05621    0.15871     0.9659267D-02       0.30063
PHD                                                        0.61791    0.38182    0.02595   -0.11962    -2.148434           -0.18427
CFBUS03                                                    0.62446    0.38995    0.00813    0.0        -0.1522526D-01      -0.10100
ISH         ACADEMIC HONORS                                0.62656    0.39258    0.00263    0.09974     0.3770281           0.06733
(CONSTANT)                                                                                             -1.211974

VARIABLE                                                  MULTIPLE R  R SQUARE  RSQ CHANGE  SIMPLE R            B                 BETA
                                 ORC06
MA                                                         0.33580    0.11276    0.11276    0.33580     2.010111            0.40716
CFTCH06                                                    0.41964    0.17609    0.06333   -0.12710    -0.2257949D-02      -0.12476
DRIVECUR    DRIVE <CURRENT SUPERVISOR>                     0.45555    0.20752    0.03143    0.23681     0.1970194           0.16302
IGPA        BS UNDERGRADUATE GPS <1.0-4.0>                 0.48011    0.23051    0.02299    0.32097     1.053335            0.24613
PHD                                                        0.49494    0.24497    0.01446   -0.05499    -1.412799           -0.12853
CFBUS06                                                    0.50722    0.25727    0.01231    0.10561     0.1582442D-01       0.13469
ISH         ACADEMIC HONORS                                0.51988    0.27027    0.01300    0.14077    -0.7952413          -0.15065
(CONSTANT)                                                                                             -4.046417

VARIABLE                                                  MULTIPLE R  R SQUARE  RSQ CHANGE  SIMPLE R            B                 BETA
ISH         ACADEMIC HONORS            ORC09
MA                                                         0.41195    0.16971    0.16971    0.41195     2.530021            0.39765
CFTCH09                                                    0.44575    0.19869    0.02898    0.34221     1.653345            0.27785
DRIVECUR    DRIVE <CURRENT SUPERVISOR>                     0.48664    0.23682    0.03813   -0.08034    -0.3965504D-02      -0.24273
IGPA        BS UNDERGRADUATE GPS <1.0-4.0>                 0.50501    0.25503    0.01822    0.14835     0.2297827           0.15775
CFBUS09                                                    0.52165    0.27213    0.01709    0.20256    -0.8446556          -0.16375
(CONSTANT)                                                 0.52288    0.27341    0.00129    0.12920     0.4754140D-02       0.03697
                                                                                                        0.6124264

VARIABLE                                                  MULTIPLE R  R SQUARE  RSQ CHANGE  SIMPLE R            B                 BETA
                                            ORC12
ISH         ACADEMIC HONORS                                0.33134    0.10979    0.10979    0.33134     2.904617            0.43170
IGPA        BS UNDERGRADUATE GPS <1.0-4.0>                 0.34895    0.12177    0.01198    0.08374    -0.5613274          -0.10291
MA                                                         0.35865    0.12863    0.00686    0.07325    -0.9102569          -0.14465
PHD                                                        0.36895    0.13613    0.00750    0.12972     1.140328            0.08139
CFTCH12                                                    0.37401    0.13988    0.00375    0.10990     0.1093002D-02       0.07342
DRIVECUR    DRIVE <CURRENT SUPERVISOR>                     0.37541    0.14093    0.00105   -0.02371     0.5863268D-01       0.03806
CFBUS12                                                    0.37648    0.14174    0.00081   -0.00874    -0.1962561D-02      -0.02962
(CONSTANT)                                                                                              0.7102633

VARIABLE                                                  MULTIPLE R  R SQUARE  RSQ CHANGE  SIMPLE R            B                 BETA
                                            ORC15
PHD                                                        0.25600    0.06554    0.06554    0.25600     2.750314            0.30965
DRIVECUR    DRIVE <CURRENT SUPERVISOR>                     0.37381    0.13973    0.07419    0.24629     0.3349199           0.34295
MA                                                         0.44967    0.20220    0.06248   -0.12426    -2.107784           -0.52835
ISH         ACADEMIC HONORS                                0.53837    0.28984    0.08764    0.20571     1.636127            0.38357
CFTCH15                                                    0.61433    0.37740    0.08755    0.24245     0.2646597D-02       0.30191
CFBUS15                                                    0.62424    0.38967    0.01227    0.11335     0.3707565D-02       0.10997
IGPA        BS UNDERGRADUATE GPS <1.0-4.0>                 0.62624    0.39218    0.00251    0.02816    -0.2187541          -0.06326
(CONSTANT)                                                                                             -2.878307

VARIABLE                                                  MULTIPLE R  R SQUARE  RSQ CHANGE  SIMPLE R            B                 BETA
                                            ORC18
DRIVECUR    DRIVE <CURRENT SUPERVISOR>                     0.31901    0.10177    0.10177    0.31901     0.4710811           0.36896
PHD                                                        0.44359    0.19677    0.09501    0.27587     3.861352            0.33253
MA                                                         0.48409    0.23435    0.03757   -0.05887    -1.919528           -0.36803
CFTCH18                                                    0.54647    0.29863    0.06429    0.24072     0.2957310D-02       0.26553
CFBUS18                                                    0.55991    0.31350    0.01487    0.17227     0.4551339D-02       0.13262
ISH         ACADEMIC HONORS                                0.56859    0.32329    0.00979    0.04828     0.5272105           0.11247
(CONSTANT)                                                                                             -5.270277
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APPENDIX 13A

MULTIPLE REGRESSION - SYLVANIA
VS. ORC

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VARIABLE                        OSP03        MULTIPLE R  R SQUARE  RSQ CHANGE  SIMPLE R           B                 BETA

PHD                                            0.53494   0.28616   0.28616     0.53494     107.2032              0.50063
DRIVECUR   DRIVE <CURRENT SUPERVISOR>          0.60841   0.37016   0.08401    -0.34031    -8.071020             -0.39757
CETCH03                                        0.68950   0.47542   0.10525    -0.07369    -0.1617466            -0.31790
IGPA       BS UNDERGRADUATE GPS <1.0-4.0>      0.71186   0.50674   0.03133     0.24978     16.15316              0.22471
ISH        ACADEMIC HONORS                     0.71490   0.51109   0.00435     0.16725    -6.288405             -0.07092
CEBUS03                                        0.71665   0.51359   0.00250     0.0        -0.1228131            -0.05148
(CONSTANT)                                                                                  42.24379

VARIABLE                      OSP06          MULTIPLE R  R SQUARE  RSQ CHANGE  SIMPLE R           B                 BETA

PHD                                            0.20394   0.04159   0.04159    -0.20394    -6.747070             -0.19843
MA                                             0.30012   0.09007   0.04848     0.13701     5.199908              0.34049
CETCH06                                        0.35490   0.12595   0.03588    -0.20348    -0.14804780D-01       -0.26444
IGPA       BS UNDERGRADUATE GPS <1.0-4.0>      0.38498   0.14821   0.02226    -0.04830    -2.066607             -0.15611
CEBUS06                                        0.40787   0.16635   0.01814    -0.13251    -0.58364730D-01       -0.13580
(CONSTANT)                                                                                  10.04089

VARIABLE                              OSP09  MULTIPLE R  R SQUARE  RSQ CHANGE  SIMPLE R           B                 BETA

CEBUS09                                        0.72041   0.51898   0.51898     0.72041     0.7800321             0.72547
DRIVECUR   DRIVE <CURRENT SUPERVISOR>          0.75649   0.57228   0.05330     0.20986     2.432828              0.19973
PHD                                            0.76649   0.58751   0.01523    -0.16413    -14.03345             -0.12668
CETCH09                                        0.77206   0.59607   0.00857    -0.06909    -0.17719470D-01       -0.12971
MA                                             0.77883   0.60657   0.01050     0.13632     6.458470              0.12980
ISH        ACADEMIC HONORS                     0.77936   0.60740   0.00083     0.13724    -1.779762             -0.03345
(CONSTANT)                                                                                 -17.47538

VARIABLE                   OSP12             MULTIPLE R  R SQUARE  RSQ CHANGE  SIMPLE R           B                 BETA

CEBUS12                                        0.56046   0.31411   0.31411     0.56046     0.3511989             0.56565
ISH        ACADEMIC HONORS                     0.59890   0.35868   0.04456    -0.15343    -11.66026             -0.18494
DRIVECUR   DRIVE <CURRENT SUPERVISOR>          0.63054   0.39758   0.03890     0.29763     2.649548              0.18355
CETCH12                                        0.64000   0.40959   0.01201    -0.10121    -0.95788060D-02       -0.06866
MA                                             0.64229   0.41254   0.00294    -0.05011    -3.889652             -0.06596
IGPA       BS UNDERGRADUATE GPS <1.0-4.0>      0.64366   0.41429   0.00176    -0.01522     2.950109              0.05771
PHD                                            0.64462   0.41553   0.00123    -0.15882    -5.065181             -0.03858
(CONSTANT)                                                                                 -21.37974

VARIABLE                              OSP15  MULTIPLE R  R SQUARE  RSQ CHANGE  SIMPLE R           B                 BETA

DRIVECUR   DRIVE <CURRENT SUPERVISOR>          0.40360   0.16289   0.16289     0.40360     4.747671              0.35016
CEBUS15                                        0.50812   0.25819   0.09530     0.38155     0.1542601             0.32956
CETCH15                                        0.52175   0.27222   0.01404    -0.13581    -0.13393520D-01       -0.11005
MA                                             0.52760   0.27836   0.00614    -0.04291    -5.906709             -0.10664
ISH        ACADEMIC HONORS                     0.53195   0.28297   0.00461     0.01045     7.394652              0.12335
IGPA       BS UNDERGRADUATE GPS <1.0-4.0>      0.53695   0.28833   0.00536    -0.00487    -4.426501             -0.09220
(CONSTANT)                                                                                 -19.81527

VARIABLE                          OSP18      MULTIPLE R  R SQUARE  RSQ CHANGE  SIMPLE R           B                 BETA

IGPA       BS UNDERGRADUATE GPS <1.0-4.0>      0.32227   0.10386   0.10386    -0.32227    -16.34611             -0.30886
DRIVECUR   DRIVE <CURRENT SUPERVISOR>          0.43149   0.18619   0.08233     0.24053     4.253661              0.28460
MA                                             0.44800   0.20070   0.01452    -0.21179    -8.510093             -0.13939
CETCH18                                        0.44965   0.20218   0.00148    -0.00559     0.65730650D-02        0.05842
PHD                                            0.45152   0.20387   0.00169    -0.14659    -5.733964             -0.04218
CEBUS18                                        0.45201   0.20431   0.00044     0.03989     0.90530990D-02        0.02253
(CONSTANT)                                                                                  25.15133
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APPENDIX 13B

MULTIPLE REGRESSION - SYLVANIA
VS. OSP

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VARIABLE                                     OCR        MULTIPLE R  R SQUARE  RSQ CHANGE  SIMPLE R          B                 BETA

DRIVECUR    DRIVE <CURRENT SUPERVISOR>                    0.57453    0.33008    0.33008    0.57453     0.8448575D-01        0.59869
CFBUS03                                                   0.63790    0.40691    0.07683   -0.36573    -0.4733349D-02       -0.28524
CFTCH03                                                   0.67905    0.46111    0.05420    0.10764     0.7256596D-03        0.20518
IGPA        BS UNDERGRADUATE GPS <1.0-4.0>                0.68988    0.47594    0.01482   -0.07976    -0.1286359           -0.25743
ISH         ACADEMIC HONORS                               0.71728    0.51449    0.03855    0.04021     0.1202716            0.19513
MA                                                        0.72502    0.52566    0.01117    0.21193     0.9079145D-01        0.15750
PHD                                                       0.73554    0.54102    0.01536   -0.06446    -0.1769027           -0.13784
(CONSTANT)                                                                                              0.1338778

VARIABLE                                     OCR        MULTIPLE R  R SQUARE  RSQ CHANGE  SIMPLE R          B                 BETA

DRIVECUR    DRIVE <CURRENT SUPERVISOR>                    0.57453    0.33008    0.33008    0.57453     0.8438265D-01        0.59796
CFTCH06                                                   0.68497    0.46918    0.13910    0.27578     0.7526103D-03        0.35614
CFBUS06                                                   0.73699    0.54315    0.07398   -0.36573    -0.4903652D-02       -0.30049
PHD                                                       0.75625    0.57191    0.02875   -0.06446    -0.2607147           -0.20314
MA                                                        0.76502    0.58525    0.01335    0.21193     0.6703853D-01        0.11629
IGPA        BS UNDERGRADUATE GPS <1.0-4.0>                0.77124    0.59482    0.00955   -0.07975    -0.9274355D-01       -0.18560
ISH         ACADEMIC HONORS                               0.78164    0.61096    0.01614    0.04021     0.1034605            0.16786
(CONSTANT)                                                                                              0.2457083D-01

VARIABLE                                     OCR        MULTIPLE R  R SQUARE  RSQ CHANGE  SIMPLE R          B                 BETA

DRIVECUR    DRIVE <CURRENT SUPERVISOR>                    0.57453    0.33008    0.33008    0.57453     0.8546988D-01        0.60567
CFTCH09                                                   0.67229    0.45197    0.12189    0.29871     0.5015172D-03        0.31688
CFBUS09                                                   0.73854    0.54544    0.09346   -0.28661    -0.4503468D-02       -0.36153
PHD                                                       0.74923    0.56135    0.01591   -0.06446    -0.2188644           -0.17053
MA                                                        0.76341    0.58279    0.02145    0.21193     0.9165410D-01        0.15900
IGPA        BS UNDERGRADUATE GPS <1.0-4.0>                0.77103    0.59449    0.01170   -0.07975    -0.1062618           -0.21265
ISH         ACADEMIC HONORS                               0.78464    0.61566    0.02117    0.04021     0.1189595            0.19300
(CONSTANT)                                                                                              0.5411010D-01

VARIABLE                                     OCR        MULTIPLE R  R SQUARE  RSQ CHANGE  SIMPLE R          B                 BETA

DRIVECUR    DRIVE <CURRENT SUPERVISOR>                    0.57453    0.33008    0.33008    0.57453     0.9420059D-01        0.66753
CFTCH12                                                   0.65488    0.42887    0.09879    0.26086     0.3443617D-03        0.25249
CFBUS12                                                   0.72286    0.52252    0.09365   -0.17700    -0.2230279D-02       -0.36745
MA                                                        0.73531    0.54068    0.01816    0.21193     0.1325069            0.22986
IGPA        BS UNDERGRADUATE GPS <1.0-4.0>                0.75291    0.56687    0.02620   -0.07976    -0.1142713           -0.22868
PHD                                                       0.76587    0.58655    0.01968   -0.06446    -0.2022189           -0.15756
ISH         ACADEMIC HONORS                               0.77256    0.59685    0.01029    0.04021     0.8146930D-01        0.13218
(CONSTANT)                                                                                              0.5704743D-03

VARIABLE                                     OCR        MULTIPLE R  R SQUARE  RSQ CHANGE  SIMPLE R          B                 BETA

DRIVECUR    DRIVE <CURRENT SUPERVISOR>                    0.57453    0.33008    0.33008    0.57453     0.9799744D-01        0.69444
CFTCH15                                                   0.64925    0.42152    0.09144    0.23316     0.3238594D-03        0.25567
CFBUS15                                                   0.72028    0.51881    0.09729   -0.16484    -0.1854716D-02       -0.38071
IGPA        BS UNDERGRADUATE GPS <1.0-4.0>                0.73330    0.53773    0.01892   -0.07976    -0.1334041           -0.26697
MA                                                        0.75901    0.57610    0.03837    0.21193     0.1345025            0.23333
PHD                                                       0.77321    0.59786    0.02176   -0.06446    -0.2134433           -0.16631
ISH         ACADEMIC HONORS                               0.77981    0.60810    0.01024    0.04021     0.8104879D-01        0.13149
(CONSTANT)                                                                                              0.2109191D-01

VARIABLE                                     OCR        MULTIPLE R  R SQUARE  RSQ CHANGE  SIMPLE R          B                 BETA

DRIVECUR    DRIVE <CURRENT SUPERVISOR>                    0.57453    0.33008    0.33008    0.57453     0.9687179D-01        0.68646
CFTCH18                                                   0.63654    0.40519    0.07511    0.21325     0.3245378D-03        0.26364
CFBUS18                                                   0.68961    0.47557    0.07038   -0.06259    -0.1209648D-02       -0.31890
MA                                                        0.70349    0.49490    0.01934    0.21193     0.1354476            0.23670
IGPA        BS UNDERGRADUATE GPS <1.0-4.0>                0.72417    0.52442    0.02952   -0.07976    -0.1058250           -0.21178
PHD                                                       0.73959    0.54699    0.02257   -0.06446    -0.2168626           -0.16897
ISH         ACADEMIC HONORS                               0.74320    0.55235    0.00536    0.04021     0.5860457D-01        0.09508
(CONSTANT)                                                                                             -0.4843586D-01
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MULTIPLE REGRESSION - SYLVANIA
VS. OCR

APPENDIX 13C

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VARIABLE                        OCT03               MULTIPLE R  R SQUARE  RSQ CHANGE  SIMPLE R          B                   BETA

ISH        ACADEMIC HONORS                           0.32478     0.10549   0.10549    -0.32478    -0.9050447             -0.31187
PHD                                                  0.35313     0.12470   0.01922     0.06256     1.220719               0.20202
MA                                                   0.37545     0.14097   0.01626    -0.22552    -0.3503525             -0.12909
CETCH03                                              0.38208     0.14599   0.00502    -0.06640    -0.1285829D-02         -0.07722
CEBUS03                                              0.38492     0.14817   0.00218     0.0         0.3730229D-02          0.04774
(CONSTANT)                                                                                         2.719789

VARIABLE                                  OCT06     MULTIPLE R  R SQUARE  RSQ CHANGE  SIMPLE R          B                   BETA

PHD                                                  0.33005     0.10893   0.10893    -0.33005    -1.716332              -0.32266
DRIVECUR   DRIVE <CURRENT SUPERVISOR>                0.38704     0.14980   0.04087     0.23318     0.1569534              0.26835
MA                                                   0.43032     0.18518   0.03538    -0.27277    -0.7302699             -0.30566
CETCH05                                              0.47896     0.22940   0.04422    -0.00855     0.2472027D-02          0.28224
CEBUS06                                              0.50824     0.25831   0.02891     0.13407     0.1108485D-01          0.16389
IGPA       BS UNDERGRADUATE GPS <1.0-4.0>            0.51972     0.27011   0.01180    -0.01569     0.2504429              0.12093
(CONSTANT)                                                                                         0.1132807

VARIABLE                        OCT09               MULTIPLE R  R SQUARE  RSQ CHANGE  SIMPLE R          B                   BETA

PHD                                                  0.31352     0.09829   0.09829    -0.31352    -1.502206              -0.33797
CETCH09                                              0.46983     0.22074   0.12245     0.24871     0.2871940D-02          0.52397
MA                                                   0.51790     0.26823   0.04748    -0.21477    -0.7252731             -0.36329
IGPA       BS UNDERGRADUATE GPS <1.0-4.0>            0.57025     0.32518   0.05696     0.00676     0.4622141              0.26709
DRIVECUR   DRIVE <CURRENT SUPERVISOR>                0.59772     0.35727   0.03209     0.18781     0.8923079D-01          0.18258
CEBUS09                                              0.61726     0.38101   0.02374     0.16990     0.7172486D-02          0.16626
ISH        ACADEMIC HONORS                           0.61893     0.38308   0.00207    -0.07351    -0.1287052             -0.06029
(CONSTANT)                                                                                        -0.1332653

VARIABLE                          OCT12             MULTIPLE R  R SQUARE  RSQ CHANGE  SIMPLE R          B                   BETA

PHD                                                  0.30694     0.09421   0.09421    -0.30694    -1.550563              -0.28284
MA                                                   0.31463     0.09899   0.00478    -0.17009    -0.2264110             -0.09195
CETCH12                                              0.32349     0.10464   0.00565    -0.02558     0.4792846D-03          0.08227
DRIVECUR   DRIVE <CURRENT SUPERVISOR>                0.32720     0.10706   0.00242     0.06508     0.2654185D-01          0.04403
ISH        ACADEMIC HONORS                           0.32852     0.10792   0.00086    -0.13076    -0.9048120D-01         -0.03437
CEBUS12                                              0.32929     0.10843   0.00051     0.03076     0.6076309D-03          0.02344
(CONSTANT)                                                                                         1.954878

VARIABLE                                  OCT15     MULTIPLE R  R SQUARE  RSQ CHANGE  SIMPLE R          B                   BETA

CEBUS15                                              0.26508     0.07027   0.07027    -0.26508    -0.5268139D-02         -0.28966
PHD                                                  0.36283     0.13164   0.06138    -0.23216    -0.9205564             -0.19213
DRIVECUR   DRIVE <CURRENT SUPERVISOR>                0.38970     0.15187   0.02023     0.10846     0.8151773D-01          0.15473
ISH        ACADEMIC HONORS                           0.41256     0.17021   0.01834    -0.20922    -0.2128911             -0.09252
MA                                                   0.41745     0.17425   0.00406    -0.23168    -0.1878715             -0.08730
CETCH15                                              0.41995     0.17636   0.00210    -0.09143     0.2052111D-03          0.04340
IGPA       BS UNDERGRADUATE GPS <1.0-4.0>            0.42053     0.17685   0.00049    -0.10956    -0.5209759D-01         -0.02793
(CONSTANT)                                                                                         1.734723

VARIABLE                                  OCT18     MULTIPLE R  R SQUARE  RSQ CHANGE  SIMPLE R          B                   BETA

ISH        ACADEMIC HONORS                           0.57276     0.32805   0.32805    -0.57276    -1.577482              -0.58769
CETCH18                                              0.66343     0.44014   0.11209     0.23976     0.1970219D-02          0.36753
PHD                                                  0.69980     0.48971   0.04957    -0.23748    -1.492305              -0.26700
MA                                                   0.71336     0.50888   0.01916    -0.09312     0.4528757              0.19235
DRIVECUR   DRIVE <CURRENT SUPERVISOR>                0.71862     0.51641   0.00753     0.11392     0.7922414D-01          0.12891
CEBUS18                                              0.72615     0.52731   0.01090    -0.01515    -0.1766473D-02         -0.10694
IGPA       BS UNDERGRADUATE GPS <1.0-4.0>            0.73157     0.53520   0.00789    -0.43675    -0.2425248             -0.11145
(CONSTANT)                                                                                         2.689410
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APPENDIX 13D

MULTIPLE REGRESSION - SYLVANIA
VS. OCT

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VARIABLE                          OCM03      MULTIPLE R  R SQUARE  RSQ CHANGE  SIMPLE R            B                BETA

MA                                            0.18545    0.03439    0.03439     0.18545     0.9663052            0.33781
ISH          ACADEMIC HONORS                  0.32868    0.10803    0.07364    -0.15408    -0.8599861           -0.28118
DRIVECUR     DRIVE <CURRENT SUPERVISOR>       0.35177    0.12374    0.01571     0.15569     0.1070911            0.15293
PHD                                           0.36177    0.13087    0.00713    -0.04523    -0.6940390           -0.10898
CETCH03                                       0.37201    0.13839    0.00752     0.08655     0.1587017D-02        0.09043
CEBUS03                                       0.38050    0.14478    0.00639     0.0         0.6778208D-02        0.08232
IGPA         BS UNDERGRADUATE GPS <1.0-4.0>   0.38144    0.14549    0.00071    -0.08026    -0.8120065D-01       -0.03275
(CONSTANT)                                                                                  2.600023

VARIABLE                                     MULTIPLE R  R SQUARE  RSQ CHANGE  SIMPLE R            B                BETA
                                  OCM05
MA                                            0.30871    0.09530    0.09530     0.30871     0.7129370            0.27339
CEBUS05                                       0.37857    0.14332    0.04801     0.22057     0.1788805D-01        0.24232
DRIVECUR     DRIVE <CURRENT SUPERVISOR>       0.41310    0.17065    0.02734     0.14723     0.1048424            0.16423
PHD                                           0.42499    0.18062    0.00996     0.17356     0.7474869            0.12875
CETCH05                                       0.43215    0.18675    0.00614     0.02498    -0.7628385D-03       -0.07980
IGPA         BS UNDERGRADUATE GPS <1.0-4.0>   0.43289    0.18739    0.00063     0.17870     0.6335132D-01        0.02803
(CONSTANT)                                                                                  1.822868

VARIABLE                          OCM09      MULTIPLE R  R SQUARE  RSQ CHANGE  SIMPLE R            B                BETA

PHD                                           0.38889    0.15123    0.15123     0.38889     2.786317             0.45822
CETCH09                                       0.57171    0.32686    0.17562    -0.29412    -0.3266177D-02       -0.43557
CEBUS09                                       0.65562    0.42984    0.10298    -0.37576    -0.1946771D-01       -0.32986
DRIVECUR     DRIVE <CURRENT SUPERVISOR>       0.66862    0.44705    0.01722    -0.13446    -0.9681348D-01       -0.14480
MA                                            0.67405    0.45435    0.00730     0.05057     0.3191809            0.11686
ISH          ACADEMIC HONORS                  0.67530    0.45603    0.00168    -0.00843    -0.1389433           -0.04758
(CONSTANT)                                                                                  3.677524

VARIABLE                          OCM12      MULTIPLE R  R SQUARE  RSQ CHANGE  SIMPLE R            B                BETA

PHD                                           0.25457    0.06480    0.06480     0.25457     1.265828             0.22726
CEBUS12                                       0.31941    0.10202    0.03722    -0.20601    -0.5276011D-02       -0.20029
ISH          ACADEMIC HONORS                  0.35533    0.12626    0.02424    -0.11563    -0.8418523           -0.31472
MA                                            0.40080    0.16064    0.03438     0.14150     0.5825685            0.23286
IGPA         BS UNDERGRADUATE GPS <1.0-4.0>   0.41665    0.17360    0.01296     0.05996     0.2635412            0.12152
CETCH12                                       0.41918    0.17571    0.00211     0.00513    -0.3257433D-03       -0.05503
DRIVECUR     DRIVE <CURRENT SUPERVISOR>       0.42073    0.17701    0.00130    -0.04319    -0.2301683D-01       -0.03758
(CONSTANT)                                                                                  2.125271

VARIABLE                                     MULTIPLE R  R SQUARE  RSQ CHANGE  SIMPLE R            B                BETA
                                  OCM15
CEBUS15                                       0.30279    0.09167    0.09167    -0.30278    -0.9565368D-02       -0.38817
MA                                            0.42594    0.18142    0.08975     0.24367     1.981587             0.64531
ISH          ACADEMIC HONORS                  0.55124    0.30386    0.12244    -0.18893    -0.9912140           -0.31794
PHD                                           0.60583    0.36703    0.06317    -0.13359    -1.543242            -0.23772
CETCH15                                       0.61849    0.38253    0.01550    -0.07587    -0.1153219D-02       -0.17999
IGPA         BS UNDERGRADUATE GPS <1.0-4.0>   0.62977    0.39661    0.01408    -0.11665    -0.3437686           -0.13601
DRIVECUR     DRIVE <CURRENT SUPERVISOR>       0.63189    0.39927    0.00266    -0.05798    -0.3974320D-01       -0.05428
(CONSTANT)                                                                                  3.990186

VARIABLE                                     MULTIPLE R  R SQUARE  RSQ CHANGE  SIMPLE R            B                BETA
                                  OCM18
DRIVECUR     DRIVE <CURRENT SUPERVISOR>       0.25559    0.06532    0.06532    -0.25559    -0.1866016           -0.27393
CETCH18                                       0.34303    0.11767    0.05234    -0.20117    -0.1127637D-02       -0.18977
PHD                                           0.37941    0.14395    0.02628     0.10580     1.191793             0.17623
ISH          ACADEMIC HONORS                  0.39835    0.15868    0.01473    -0.11099    -0.6396402           -0.21499
IGPA         BS UNDERGRADUATE GPS <1.0-4.0>   0.43166    0.18633    0.02765     0.08820     0.5399793            0.22386
CEBUS18                                       0.44192    0.19529    0.00896    -0.20177    -0.1639034D-02       -0.08952
MA                                            0.44531    0.19830    0.00301    -0.14162    -0.1925077           -0.06918
(CONSTANT)                                                                                  2.979136
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APPENDIX 13E

MULTIPLE REGRESSION - SYLVANIA
VS. OCM

APPENDIX 13F

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VARIABLE                                                      MULTIPLE R  R SQUARE  RSQ CHANGE  SIMPLE R            B           BETA

ISH          ACADEMIC HONORS                                   0.28466    0.08103   0.08103     0.28466        7199.362       0.37305
PHD                                                            0.39583    0.15668   0.07565    -0.20450      -12981.33       -0.32304
MA                                                             0.42395    0.17973   0.02305     0.19414        2814.055       0.15801
DRIVECUR     DRIVE <CURRENT SUPERVISOR>                        0.44363    0.19681   0.01708     0.15554         761.0862      0.17225
IGPA         BS UNDERGRADUATE GPS <1.0-4.0>                    0.46609    0.21724   0.02043     0.05640       -2494.218      -0.15962
CETCH03                                                        0.46972    0.22064   0.00359     0.00775           7.411745    0.06403
(CONSTANT)                                                                                                   12410.49

VARIABLE                                                      MULTIPLE R  R SQUARE  RSQ CHANGE  SIMPLE R            B           BETA

ISH          ACADEMIC HONORS                                   0.22805    0.05201   0.05201     0.22805        6909.113       0.38875
MA                                                             0.35180    0.12376   0.07176    -0.13119       -6377.408      -0.38358
DRIVECUR     DRIVE <CURRENT SUPERVISOR>                        0.37302    0.13914   0.01538     0.09063         613.2342      0.15871
CETCH06                                                        0.39921    0.15937   0.02023     0.06003           8.129346    0.13341
PHD                                                            0.40311    0.16250   0.00313     0.05476        2261.783       0.06112
CEBUS06                                                        0.40455    0.16366   0.00116     0.00975         -16.56735     -0.03521
(CONSTANT)                                                                                                   11082.52

VARIABLE                                                      MULTIPLE R  R SQUARE  RSQ CHANGE  SIMPLE R            B           BETA

CETCH09                                                        0.33801    0.11425   0.11425     0.33801          17.35803     0.34853
CEBUS09                                                        0.39763    0.15811   0.04386     0.24218          72.78024     0.18460
DRIVECUR     DRIVE <CURRENT SUPERVISOR>                        0.43259    0.18800   0.02989     0.13900         888.8264      0.19900
ISH          ACADEMIC HONORS                                   0.45150    0.20366   0.01565     0.19994        4302.755       0.22856
MA                                                             0.46726    0.21833   0.01466     0.10362       -2464.544      -0.13508
IGPA         BS UNDERGRADUATE GPS <1.0-4.0>                    0.46926    0.22021   0.00187    -0.01088        -878.8365     -0.05827
(CONSTANT)                                                                                                   12330.90

VARIABLE                                                      MULTIPLE R  R SQUARE  RSQ CHANGE  SIMPLE R            B           BETA

CETCH12                                                        0.36204    0.13107   0.13107     0.36204          20.27692     0.39426
IGPA         BS UNDERGRADUATE GPS <1.0-4.0>                    0.42977    0.18470   0.05363     0.15225        3908.301       0.20741
CEBUS12                                                        0.46463    0.21588   0.03119    -0.13497         -40.06189    -0.17503
PHD                                                            0.48704    0.23721   0.02133     0.28908        8166.937       0.16875
DRIVECUR     DRIVE <CURRENT SUPERVISOR>                        0.49530    0.24532   0.00811     0.04040         496.9676      0.09339
MA                                                             0.49574    0.24576   0.00038     0.20144        -517.3533     -0.02380
(CONSTANT)                                                                                                    5432.706

VARIABLE                                                      MULTIPLE R  R SQUARE  RSQ CHANGE  SIMPLE R            B           BETA

PHD                                                            0.45932    0.21097   0.21097     0.45932       20622.13        0.42154
CETCH15                                                        0.53357    0.28470   0.07373     0.39639          14.96309     0.31082
DRIVECUR     DRIVE <CURRENT SUPERVISOR>                        0.59725    0.35671   0.07202     0.19643        1337.679       0.24872
CEBUS15                                                        0.60610    0.36736   0.01064     0.15194          21.31326     0.11477
ISH          ACADEMIC HONORS                                   0.61110    0.37344   0.00609     0.05006       -1670.865      -0.07112
MA                                                             0.61142    0.37383   0.00039     0.22517        -539.6848     -0.02886
(CONSTANT)                                                                                                   10866.93

VARIABLE                                                      MULTIPLE R  R SQUARE  RSQ CHANGE  SIMPLE R            B           BETA

CETCH18                                                        0.55544    0.30852   0.30852     0.55544          35.10572     0.51405
CEBUS18                                                        0.71640    0.51323   0.20471     0.53061          91.42931     0.43047
DRIVECUR     DRIVE <CURRENT SUPERVISOR>                        0.74941    0.56162   0.04839     0.27357        1717.468       0.21937
ISH          ACADEMIC HONORS                                   0.77215    0.59621   0.03460    -0.08544       -6640.272      -0.25853
PHD                                                            0.80237    0.64380   0.04758     0.29709       17073.06        0.23978
IGPA         BS UNDERGRADUATE GPS <1.0-4.0>                    0.80582    0.64934   0.00554    -0.00795        2809.916       0.10136
MA                                                             0.80796    0.65280   0.00346     0.21305       -2371.577      -0.07416
(CONSTANT)                                                                                                    4961.523
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MULTIPLE REGRESSION - SYLVANIA
vs. OAC

APPENDIX 14A

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VARIABLE            ORC03                    MULTIPLE R  R SQUARE  RSQ CHANGE  SIMPLE R          B                 BETA

PHD                                           0.19436    0.03777    0.03777    0.19436     2.092231            0.19262
CETCH03                                       0.22536    0.05079    0.01301    0.14362     0.3979519D-02       0.12972
DRIVECUR   DRIVE <CURRENT SUPERVISOR>         0.23025    0.05301    0.00223    0.05040     0.7048657D-01       0.05028
MA                                            0.23582    0.05561    0.00260    0.05539    -0.3452746          -0.06279
IGPA       BS UNDERGRADUATE GPS <1.0-4.0>     0.23670    0.05603    0.00042    0.04187     0.1113538           0.02159
(CONSTANT)                                                                                -0.4003454

VARIABLE            ORC06                    MULTIPLE R  R SQUARE  RSQ CHANGE  SIMPLE R          B                 BETA

MA                                            0.27508    0.07567    0.07567    0.27508     1.200666            0.19564
CETCH06                                       0.29588    0.08754    0.01188    0.19414     0.2066018D-02       0.10585
DRIVECUR   DRIVE <CURRENT SUPERVISOR>         0.31156    0.09707    0.00953    0.11697     0.1639448           0.10478
PHD                                           0.31783    0.10101    0.00394    0.16413     0.8702381           0.07178
CEBUS06                                       0.32082    0.10292    0.00191    0.05357     0.3616952D-02       0.03982
ISH        ACADEMIC HONORS                    0.32205    0.10371    0.00079    0.14492     0.3223072           0.05197
IGPA       BS UNDERGRADUATE GPS <1.0-4.0>     0.32472    0.10544    0.00173    0.05424    -0.2786530          -0.04842
(CONSTANT)                                                                                -0.3255527

VARIABLE            ORC09                    MULTIPLE R  R SQUARE  RSQ CHANGE  SIMPLE R          B                 BETA

CETCH09                                       0.25490    0.06498    0.06498    0.25490     0.2372355D-02       0.18051
MA                                            0.30305    0.09184    0.02686    0.24106     0.6882415           0.13270
DRIVECUR   DRIVE <CURRENT SUPERVISOR>         0.33754    0.11393    0.02209    0.16538     0.2080827           0.15738
ISH        ACADEMIC HONORS                    0.35141    0.12349    0.00956    0.19100     0.7420864           0.14160
IGPA       BS UNDERGRADUATE GPS <1.0-4.0>     0.35823    0.12833    0.00484    0.03407    -0.3921780          -0.08064
(CONSTANT)                                                                                -0.9949052

VARIABLE            ORC12                    MULTIPLE R  R SQUARE  RSQ CHANGE  SIMPLE R          B                 BETA

CETCH12                                       0.28772    0.08278    0.08278    0.28772     0.2239965D-02       0.23217
ISH        ACADEMIC HONORS                    0.33906    0.11496    0.03219    0.23049     0.5810443           0.13116
MA                                            0.34692    0.12035    0.00539    0.22778     0.2745191           0.06262
IGPA       BS UNDERGRADUATE GPS <1.0-4.0>     0.34955    0.12219    0.00183    0.13119     0.1958188           0.04763
PHD                                           0.35149    0.12354    0.00135    0.13039     0.3510846           0.04054
DRIVECUR   DRIVE <CURRENT SUPERVISOR>         0.35196    0.12388    0.00034   -0.00752    -0.2095393D-01      -0.01866
CEBUS12                                       0.35229    0.12411    0.00023    0.07337     0.5657198D-03       0.01550
(CONSTANT)                                                                                -0.8106563

VARIABLE            ORC15                    MULTIPLE R  R SQUARE  RSQ CHANGE  SIMPLE R          B                 BETA

IGPA       BS UNDERGRADUATE GPS <1.0-4.0>     0.15308    0.02343    0.02343   -0.15308    -2.727538           -0.21385
MA                                            0.22773    0.05186    0.02843    0.11632     2.828268            0.20793
CETCH15                                       0.23901    0.05712    0.00526   -0.00452    -0.2112159D-02      -0.07444
CEBUS15                                       0.23974    0.05748    0.00035   -0.01019    -0.1834664D-02      -0.01880
DRIVECUR   DRIVE <CURRENT SUPERVISOR>         0.24033    0.05779    0.00031    0.01893     0.6140024D-01       0.01771
(CONSTANT)                                                                                 7.296071

VARIABLE            ORC18                    MULTIPLE R  R SQUARE  RSQ CHANGE  SIMPLE R          B                 BETA

IGPA       BS UNDERGRADUATE GPS <1.0-4.0>     0.19141    0.03664    0.03664   -0.19141    -1.881289           -0.24799
MA                                            0.24832    0.06166    0.02502    0.09513     1.440114            0.17801
CETCH18                                       0.25289    0.06396    0.00229    0.01241    -0.8589382D-03      -0.05226
DRIVECUR   DRIVE <CURRENT SUPERVISOR>         0.25436    0.06455    0.00059    0.02068     0.5132528D-01       0.02489
PHD                                           0.25469    0.06486    0.00032    0.03084     0.3091995           0.01935
(CONSTANT)                                                                                 4.614493
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MULTIPLE REGRESSION - ALL COMBINED
VS. ORC

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VARIABLE                                OSP03   MULTIPLE R  R SQUARE  RSQ CHANGE  SIMPLE R          B                BETA

DRIVECUR   DRIVE <CURRENT SUPERVISOR>             0.13064   0.01707   0.01707    0.13064     1.424226            0.11938
CETCH03                                           0.18062   0.03262   0.01556   -0.12303    -0.3861974D-01      -0.14792
PHD                                               0.22497   0.05061   0.01799    0.11377    10.69658             0.11571
CEBUS03                                           0.22955   0.05269   0.00208   -0.05497    -0.5189872D-01      -0.04386
MA                                                0.23373   0.05463   0.00194    0.05742     3.097293            0.06618
ISH        ACADEMIC HONORS                        0.23954   0.05738   0.00275   -0.04245    -3.632033           -0.07680
IGPA       BS UNDERGRADUATE GPS <1.0-4.0>         0.24255   0.05884   0.00146    0.05477     1.941049            0.04423
(CONSTANT)                                                                                 -13.66111

VARIABLE                                OSP06   MULTIPLE R  R SQUARE  RSQ CHANGE  SIMPLE R          B                BETA

CETCH05                                           0.17799   0.03168   0.03168   -0.17799    -0.2553937D-01      -0.19217
MA                                                0.18835   0.03547   0.00379   -0.00101     4.302204            0.10296
PHD                                               0.19739   0.03896   0.00349   -0.06503    -5.207300           -0.06308
ISH        ACADEMIC HONORS                        0.20219   0.04088   0.00192   -0.05233    -1.990409           -0.04714
DRIVECUR   DRIVE <CURRENT SUPERVISOR>             0.20429   0.04173   0.00085    0.03631     0.3124692           0.02933
(CONSTANT)                                                                                   4.717052

VARIABLE                                OSP09   MULTIPLE R  R SQUARE  RSQ CHANGE  SIMPLE R          B                BETA

DRIVECUR   DRIVE <CURRENT SUPERVISOR>             0.11189   0.01252   0.01252    0.11188     3.274167            0.11951
MA                                                0.13459   0.01811   0.00560   -0.06540   -10.09388            -0.09392
ISH        ACADEMIC HONORS                        0.17229   0.02968   0.01157    0.06845    12.16908             0.11206
CETCH09                                           0.17991   0.03237   0.00268   -0.06772    -0.1436200D-01      -0.05274
PHD                                               0.18430   0.03396   0.00160   -0.06558    -9.128771           -0.04300
CEBUS09                                           0.18734   0.03510   0.00113    0.03288     0.4120050D-01       0.03442
IGPA       BS UNDERGRADUATE GPS <1.0-4.0>         0.18764   0.03521   0.00011    0.04073     1.245492            0.01236
(CONSTANT)                                                                                 -22.76414

VARIABLE                                OSP12   MULTIPLE R  R SQUARE  RSQ CHANGE  SIMPLE R          B                BETA

DRIVECUR   DRIVE <CURRENT SUPERVISOR>             0.17093   0.02922   0.02922    0.17093     5.604024            0.17344
ISH        ACADEMIC HONORS                        0.19967   0.03987   0.01065    0.10419    16.88794             0.13186
PHD                                               0.22218   0.04935   0.00950   -0.07881   -19.08938            -0.07625
CEBUS12                                           0.23217   0.05390   0.00454    0.08433     0.8216593D-01       0.07785
CETCH12                                           0.23705   0.05619   0.00229   -0.03010    -0.1092635D-01      -0.03917
MA                                                0.23979   0.05750   0.00131   -0.00820    -5.606432           -0.04424
(CONSTANT)                                                                                 -40.63594

VARIABLE                                OSP15   MULTIPLE R  R SQUARE  RSQ CHANGE  SIMPLE R          B                BETA

ISH        ACADEMIC HONORS                        0.11967   0.01432   0.01432    0.11967    36.76810             0.14705
DRIVECUR   DRIVE <CURRENT SUPERVISOR>             0.16153   0.02612   0.01180    0.10933     6.743168            0.10690
CETCH15                                           0.18477   0.03414   0.00801   -0.06672    -0.4728852D-01      -0.09161
PHD                                               0.19273   0.03714   0.00301   -0.04903   -31.72512            -0.06491
MA                                                0.19478   0.03794   0.00079    0.03892     9.967376            0.04028
IGPA       BS UNDERGRADUATE GPS <1.0-4.0>         0.19654   0.03867   0.00073    0.04416    -7.338152           -0.03163
CEBUS15                                           0.19734   0.03894   0.00027   -0.01116    -0.3040402D-01      -0.01713
(CONSTANT)                                                                                 -25.61381

VARIABLE                                OSP18   MULTIPLE R  R SQUARE  RSQ CHANGE  SIMPLE R          B                BETA

DRIVECUR   DRIVE <CURRENT SUPERVISOR>             0.16423   0.02697   0.02697    0.16423     3.400303            0.17042
CEBUS18                                           0.19857   0.03943   0.01245    0.11112     0.6470805D-01       0.13185
CETCH18                                           0.21730   0.04722   0.00779   -0.06244    -0.1161721D-01      -0.07306
PHD                                               0.22786   0.05192   0.00470   -0.08538    -8.620165           -0.05576
IGPA       BS UNDERGRADUATE GPS <1.0-4.0>         0.23075   0.05324   0.00132   -0.02674    -3.518109           -0.04794
ISH        ACADEMIC HONORS                        0.23237   0.05400   0.00075    0.00174     3.208468            0.04057
MA                                                0.23399   0.05475   0.00075   -0.04235    -2.658651           -0.03397
(CONSTANT)                                                                                  -4.903429
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MULTIPLE REGRESSION - ALL COMBINED
VS. OSP

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VARIABLE                                              MULTIPLE R  R SQUARE  RSQ CHANGE  SIMPLE R          B            BETA

DRIVECUR   DRIVE <CURRENT SUPERVISOR>                  0.33921    0.11507   0.11507     0.33921    0.4995503D-01    0.33876
ISH        ACADEMIC HONORS                             0.36010    0.12967   0.01461     0.12282    0.4861594D-01    0.08317
CEBUS03                                                0.36602    0.13397   0.00430     0.05073    0.9613544D-03    0.06527
IGPA       BS UNDERGRADUATE GPS <1.0-4.0>              0.36971    0.13669   0.00272     0.13050    0.3596708D-01    0.06431
PHD                                                    0.37080    0.13749   0.00080    -0.00054   -0.3719008D-01   -0.03255
CETCH03                                                0.37156    0.13805   0.00055     0.03860    0.7902882D-04    0.02449
(CONSTANT)                                                                                        -0.6381822D-01

VARIABLE                                              MULTIPLE R  R SQUARE  RSQ CHANGE  SIMPLE R          B            BETA

DRIVECUR   DRIVE <CURRENT SUPERVISOR>                  0.33921    0.11507   0.11507     0.33921    0.4966485D-01    0.33679
ISH        ACADEMIC HONORS                             0.36010    0.12967   0.01461     0.12282    0.4142980D-01    0.07888
CETCH05                                                0.36765    0.13517   0.00549     0.09726    0.1805553D-03    0.09815
CEBUS05                                                0.37514    0.14073   0.00556     0.07385    0.6731570D-03    0.07862
IGPA       BS UNDERGRADUATE GPS <1.0-4.0>              0.38069    0.14493   0.00419     0.13050    0.4580006D-01    0.08444
PHD                                                    0.38331    0.14692   0.00200    -0.00054   -0.4502353D-01   -0.03940
MA                                                     0.38388    0.14736   0.00044     0.07792   -0.1470434D-01   -0.02542
(CONSTANT)                                                                                        -0.9291373D-01

VARIABLE                                              MULTIPLE R  R SQUARE  RSQ CHANGE  SIMPLE R          B            BETA

DRIVECUR   DRIVE <CURRENT SUPERVISOR>                  0.33921    0.11507   0.11507     0.33921    0.4934209D-01    0.33460
ISH        ACADEMIC HONORS                             0.36010    0.12967   0.01461     0.12282    0.4429685D-01    0.07578
CEBUS09                                                0.37241    0.13869   0.00901     0.10522    0.6215223D-03    0.09647
IGPA       BS UNDERGRADUATE GPS <1.0-4.0>              0.37675    0.14194   0.00325     0.13050    0.4278325D-01    0.07887
CETCH09                                                0.37920    0.14379   0.00185     0.05704    0.8067347D-04    0.05504
PHD                                                    0.38093    0.14510   0.00131    -0.00054   -0.3654185D-01   -0.03198
MA                                                     0.38128    0.14538   0.00027     0.07792   -0.1174225D-01   -0.02030
(CONSTANT)                                                                                        -0.8107459D-01

VARIABLE                                              MULTIPLE R  R SQUARE  RSQ CHANGE  SIMPLE R          B            BETA

DRIVECUR   DRIVE <CURRENT SUPERVISOR>                  0.33921    0.11507   0.11507     0.33921    0.4912748D-01    0.33314
CEBUS12                                                0.36112    0.13041   0.01534     0.12917    0.5243985D-03    0.10886
ISH        ACADEMIC HONORS                             0.37697    0.14211   0.01170     0.12282    0.4512101D-01    0.07719
IGPA       BS UNDERGRADUATE GPS <1.0-4.0>              0.38132    0.14541   0.00330     0.13050    0.4301788D-01    0.07931
CETCH12                                                0.38359    0.14714   0.00174     0.07308    0.7125433D-04    0.05598
PHD                                                    0.38500    0.14822   0.00108    -0.00054   -0.2993123D-01   -0.02620
MA                                                     0.38570    0.14877   0.00054     0.07792   -0.1662423D-01   -0.02874
(CONSTANT)                                                                                        -0.8161412D-01

VARIABLE                                              MULTIPLE R  R SQUARE  RSQ CHANGE  SIMPLE R          B            BETA

DRIVECUR   DRIVE <CURRENT SUPERVISOR>                  0.33921    0.11507   0.11507     0.33921    0.4982658D-01    0.33788
ISH        ACADEMIC HONORS                             0.36010    0.12967   0.01461     0.12282    0.4500127D-01    0.07699
CEBUS15                                                0.37137    0.13792   0.00824     0.10007    0.3378872D-03    0.08143
IGPA       BS UNDERGRADUATE GPS <1.0-4.0>              0.37560    0.14108   0.00315     0.13050    0.4278878D-01    0.07889
CETCH15                                                0.37995    0.14436   0.00329     0.08613    0.9143417D-04    0.07577
MA                                                     0.38174    0.14573   0.00136     0.07792   -0.1957156D-01   -0.03383
PHD                                                    0.38265    0.14642   0.00069    -0.00054   -0.3277793D-01   -0.02869
(CONSTANT)                                                                                        -0.8908387D-01

VARIABLE                                              MULTIPLE R  R SQUARE  RSQ CHANGE  SIMPLE R          B            BETA

DRIVECUR   DRIVE <CURRENT SUPERVISOR>                  0.33921    0.11507   0.11507     0.33921    0.4973587D-01    0.33727
CEBUS18                                                0.36796    0.13540   0.02033     0.14155    0.4330066D-03    0.11938
ISH        ACADEMIC HONORS                             0.38180    0.14577   0.01037     0.12282    0.4587945D-01    0.07849
IGPA       BS UNDERGRADUATE GPS <1.0-4.0>              0.38530    0.14846   0.00269     0.13050    0.3861564D-01    0.07119
CETCH18                                                0.38699    0.14976   0.00130     0.07417    0.6257268D-04    0.05333
MA                                                     0.38853    0.15104   0.00128     0.07792   -0.1945802D-01   -0.03364
PHD                                                    0.38934    0.15158   0.00055    -0.00054   -0.2917813D-01   -0.02554
(CONSTANT)                                                                                        -0.7923677D-01
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APPENDIX 14C

MULTIPLE REGRESSION - ALL COMBINED
VS. OCR

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VARIABLE                                   OCT03      MULTIPLE R   R SQUARE   RSQ CHANGE    SIMPLE R                B                 BETA

ISH         ACADEMIC HONORS                            0.16411    0.02693    0.02693     -0.16411      -0.2188874                -0.08713
PHD                                                    0.20212    0.04085    0.01392     -0.14175      -0.4646482                -0.09462
CETCH03                                                0.21901    0.04796    0.00711     -0.12767      -0.1331399D-02            -0.09600
IGPA        BS UNDERGRADUATE GPS <1.0-4.0>             0.23737    0.05634    0.00838     -0.16092      -0.2390632                -0.10286
CEBUS03                                                0.23926    0.05725    0.00090      0.01443       0.1770631D-02             0.02797
DRIVECUR    DRIVE <CURRENT SUPERVISOR>                 0.24081    0.05799    0.00074     -0.04060      -0.1742022D-01            -0.02749
(CONSTANT)                                                                                              3.648445

VARIABLE                                   OCT06      MULTIPLE R   R SQUARE   RSQ CHANGE    SIMPLE R                B                 BETA

MA                                                     0.21046    0.04429    0.04429     -0.21046      -0.3707073                -0.18471
PHD                                                    0.23688    0.05611    0.01182     -0.17906      -0.4960794                -0.10481
CEBUS06                                                0.24854    0.06177    0.00566      0.06287       0.2522006D-02             0.07111
CETCH06                                                0.25872    0.06693    0.00516     -0.14453      -0.6787765D-03            -0.08907
DRIVECUR    DRIVE <CURRENT SUPERVISOR>                 0.26481    0.07013    0.00319      0.04047       0.3830456D-01             0.06271
IGPA        BS UNDERGRADUATE GPS <1.0-4.0>             0.26953    0.07264    0.00252     -0.10584      -0.1796086                -0.07994
ISH         ACADEMIC HONORS                            0.27513    0.07570    0.00305     -0.05943       0.1620188                 0.06692
(CONSTANT)                                                                                              2.728539

VARIABLE                                   OCT09      MULTIPLE R   R SQUARE   RSQ CHANGE    SIMPLE R                B                 BETA

IGPA        BS UNDERGRADUATE GPS <1.0-4.0>             0.18749    0.03515    0.03515     -0.18749      -0.2958947                -0.14231
PHD                                                    0.24059    0.05788    0.02273     -0.18176      -0.5659907                -0.12922
MA                                                     0.24785    0.06143    0.00355     -0.15739      -0.1428687                -0.06443
CEBUS09                                                0.25329    0.06416    0.00273      0.04057       0.1329921D-02             0.05385
CETCH09                                                0.25358    0.06435    0.00020     -0.05292      -0.7955105D-04            -0.01416
ISH         ACADEMIC HONORS                            0.25381    0.06442    0.00007     -0.11862      -0.2225824D-01            -0.00993
(CONSTANT)                                                                                              3.287452

VARIABLE                                   OCT12      MULTIPLE R   R SQUARE   RSQ CHANGE    SIMPLE R                B                 BETA

MA                                                     0.20196    0.04079    0.04079     -0.20196      -0.3320300                -0.13927
PHD                                                    0.23038    0.05308    0.01229     -0.17788      -0.5364083                -0.11391
IGPA        BS UNDERGRADUATE GPS <1.0-4.0>             0.24363    0.05936    0.00628     -0.14303      -0.2310289                -0.10334
ISH         ACADEMIC HONORS                            0.24758    0.06129    0.00194     -0.07445       0.1294064                 0.05372
DRIVECUR    DRIVE <CURRENT SUPERVISOR>                 0.25092    0.06296    0.00167     -0.06199      -0.2495872D-01            -0.04107
CEBUS12                                                0.25255    0.06378    0.00082     -0.04315      -0.5496581D-03            -0.02769
CETCH12                                                0.25286    0.06394    0.00016     -0.07517      -0.7155387D-04            -0.01364
(CONSTANT)                                                                                              3.317126

VARIABLE                                   OCT15      MULTIPLE R   R SQUARE   RSQ CHANGE    SIMPLE R                B                 BETA

MA                                                     0.20526    0.04213    0.04213     -0.20526      -0.4195579                -0.18376
PHD                                                    0.23268    0.05414    0.01201     -0.17792      -0.5336259                -0.11832
DRIVECUR    DRIVE <CURRENT SUPERVISOR>                 0.25052    0.06276    0.00862     -0.10688      -0.4717111D-01            -0.08104
IGPA        BS UNDERGRADUATE GPS <1.0-4.0>             0.26376    0.06957    0.00681     -0.15222      -0.2804691                -0.13100
ISH         ACADEMIC HONORS                            0.28586    0.08172    0.01215     -0.01934       0.3002269                 0.13013
CETCH15                                                0.28947    0.08379    0.00208     -0.01851       0.2743193D-03             0.05759
CEBUS15                                                0.29251    0.08562    0.00183     -0.04131      -0.7248146D-03            -0.04425
(CONSTANT)                                                                                              3.715974

VARIABLE                                   OCT19      MULTIPLE R   R SQUARE   RSQ CHANGE    SIMPLE R                B                 BETA

IGPA        BS UNDERGRADUATE GPS <1.0-4.0>             0.14932    0.02230    0.02230     -0.14932      -0.3395419                -0.15520
MA                                                     0.17611    0.03102    0.00872     -0.13305      -0.3673125                -0.15744
ISH         ACADEMIC HONORS                            0.21335    0.04552    0.01450      0.00478       0.3105702                 0.13173
CETCH18                                                0.23363    0.05458    0.00906      0.05879       0.5260507D-03             0.11099
PHD                                                    0.24021    0.05770    0.00312     -0.10494      -0.2844762                -0.06173
CEBUS19                                                0.24044    0.05781    0.00011     -0.00518      -0.1588857D-03            -0.01086
(CONSTANT)                                                                                              3.436050
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APPENDIX 14D

MULTIPLE REGRESSION - ALL COMBINED
VS. OCT

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VARIABLE
                                  OCM03     MULTIPLE R   R SQUARE   RSQ CHANGE   SIMPLE R          B                 BETA
CEBUS03
ISH         ACADEMIC HONORS                  0.08203     0.00673    0.00673      0.08203      0.5659639D-02        0.08815
MA                                           0.11547     0.01333    0.00660     -0.07171     -0.3070788           -0.12052
CETCH03                                      0.14439     0.02085    0.00752      0.05006      0.2645927            0.18493
PHD                                          0.15653     0.02450    0.00365      0.06208      0.9018556D-03        0.08411
DRIVECUR    DRIVE <CURRENT SUPERVISOR>       0.16397     0.02689    0.00239     -0.02467     -0.2620649           -0.05261
IGPA        BS UNDERGRADUATE GPS <1.0-4.0>   0.17112     0.02928    0.00239     -0.04842     -0.3104403D-01       -0.04829
(CONSTANT)                                   0.17158     0.02944    0.00016     -0.04786     -0.3447459D-01       -0.01458
                                                                                               4.024764

VARIABLE
                                  OCM06     MULTIPLE R   R SQUARE   RSQ CHANGE   SIMPLE R          B                 BETA
MA
CETCH06                                      0.13062     0.01706    0.01706      0.13062      0.3672650            0.14324
DRIVECUR    DRIVE <CURRENT SUPERVISOR>       0.13987     0.01956    0.00250     -0.00379     -0.4202412D-03       -0.05154
CEBUS06                                      0.14412     0.02077    0.00121      0.04661      0.2350260D-01        0.03596
(CONSTANT)                                   0.14692     0.02159    0.00082      0.03509      0.1086155D-02        0.02862
                                                                                               3.003370

VARIABLE
                                  OCM10     MULTIPLE R   R SQUARE   RSQ CHANGE   SIMPLE R          B                 BETA
CEBUS09
DRIVECUR    DRIVE <CURRENT SUPERVISOR>       0.22530     0.05076    0.05076     -0.22530     -0.6244511D-02       -0.22583
IGPA        BS UNDERGRADUATE GPS <1.0-4.0>   0.26359     0.06948    0.01872     -0.13453     -0.9226529D-01       -0.14578
ISH         ACADEMIC HONORS                  0.27109     0.07349    0.00401      0.04737      0.1670095            0.07174
MA                                           0.27305     0.07456    0.00107     -0.02697     -0.1193723           -0.04758
CETCH09                                      0.27531     0.07580    0.00124      0.00543      0.1178841            0.04748
(CONSTANT)                                   0.27625     0.07632    0.00052     -0.03628     -0.1547447D-03       -0.02460
                                                                                               3.355990

VARIABLE
                                  OCM12     MULTIPLE R   R SQUARE   RSQ CHANGE   SIMPLE R          B                 BETA
CEBUS12
PHD                                          0.19353     0.03746    0.03746     -0.19353     -0.4071024D-02       -0.18731
DRIVECUR    DRIVE <CURRENT SUPERVISOR>       0.23267     0.05414    0.01668      0.13299      0.5400295            0.10475
MA                                           0.25631     0.06570    0.01156     -0.10924     -0.7962241D-01       -0.11967
ISH         ACADEMIC HONORS                  0.26232     0.06881    0.00312      0.06511      0.2570991            0.09851
IGPA        BS UNDERGRADUATE GPS <1.0-4.0>   0.27295     0.07450    0.00569     -0.04945     -0.2843037           -0.10780
CETCH12                                      0.27944     0.07809    0.00358      0.04725      0.1543152            0.06305
(CONSTANT)                                   0.28114     0.07904    0.00095     -0.03146     -0.1938621D-03       -0.03375
                                                                                               3.071169

VARIABLE
                                  OCM15     MULTIPLE R   R SQUARE   RSQ CHANGE   SIMPLE R          B                 BETA
CEBUS15
ISH         ACADEMIC HONORS                  0.20533     0.04216    0.04216     -0.20533     -0.3649596D-02       -0.20088
IGPA        BS UNDERGRADUATE GPS <1.0-4.0>   0.24067     0.05792    0.01576     -0.15158     -0.2608596           -0.10193
DRIVECUR    DRIVE <CURRENT SUPERVISOR>       0.25215     0.06358    0.00566     -0.13192     -0.1861389           -0.07837
MA                                           0.25982     0.06751    0.00393     -0.06717     -0.4324080D-01       -0.06697
PHD                                          0.26174     0.06851    0.00099     -0.06662      0.1131815            0.04469
CETCH15                                      0.26421     0.06981    0.00130     -0.04425     -0.2007475           -0.04013
(CONSTANT)                                   0.26438     0.06990    0.00009     -0.04222      0.5475704D-04        0.01036
                                                                                               3.672466

VARIABLE
                                  OCM18     MULTIPLE R   R SQUARE   RSQ CHANGE   SIMPLE R          B                 BETA
CEBUS18
DRIVECUR    DRIVE <CURRENT SUPERVISOR>       0.21864     0.04780    0.04780     -0.21864     -0.3272380D-02       -0.20399
CETCH18                                      0.28415     0.08074    0.03294     -0.18082     -0.1199213           -0.18387
IGPA        BS UNDERGRADUATE GPS <1.0-4.0>   0.29404     0.08646    0.00572     -0.12167     -0.2862476D-03       -0.05508
MA                                           0.29877     0.08927    0.00280      0.02129      0.1717024            0.07157
PHD                                          0.30287     0.09173    0.00247     -0.10813     -0.1196312           -0.04676
(CONSTANT)                                   0.30413     0.09250    0.00076     -0.04536     -0.1520161           -0.03010
                                                                                               3.249608
```

MULTIPLE REGRESSION - ALL COMBINED
VS. OCM

APPENDIX 14E

APPENDIX 14F

```
VARIABLE                                    MULTIPLE R  R SQUARE  RSQ CHANGE  SIMPLE R           B              BETA

PHD                                          0.16103    0.02593   0.02593     0.16103      7772.723          0.24357
MA                                           0.23896    0.05716   0.03117    -0.10419     -4078.343         -0.25255
DRIVECUR   DRIVE <CURRENT SUPERVISOR>        0.29569    0.08744   0.03033     0.16022      775.4763          0.18836
CEBUS03                                      0.33894    0.11488   0.02744     0.14237      60.77267          0.14780
ISH        ACADEMIC HONORS                   0.36885    0.13605   0.02117     0.10078      2538.689          0.15557
CETCH03                                      0.39312    0.15454   0.01649    -0.13933     -12.40467         -0.13769
IGPA       HS UNDERGRADUATE GPS <1.0-4.0>    0.39451    0.15564   0.00110     0.10427      581.1896          0.03838
(CONSTANT)                                                                                 6862.270
```

```
VARIABLE                                    MULTIPLE R  R SQUARE  RSQ CHANGE  SIMPLE R           B              BETA

DRIVECUR   DRIVE <CURRENT SUPERVISOR>        0.20211    0.04085   0.04085     0.20211      916.3642          0.21099
PHD                                          0.27638    0.07639   0.03554     0.19047      6837.168          0.20318
CEBUS06                                      0.32707    0.10697   0.03059     0.17341      40.67680          0.16131
ISH        ACADEMIC HONORS                   0.35348    0.12495   0.01798     0.17839      3146.144          0.18241
CETCH06                                      0.37286    0.13902   0.01407    -0.05926     -5.692681         -0.10507
MA                                           0.37842    0.14320   0.00418     0.06254     -1329.890         -0.07806
(CONSTANT)                                                                                 6659.479
```

```
VARIABLE                                    MULTIPLE R  R SQUARE  RSQ CHANGE  SIMPLE R           B              BETA

CEBUS09                                      0.25138    0.06319   0.06319     0.25138      43.66964          0.22685
CETCH09                                      0.34271    0.11745   0.05426     0.25012      9.089458          0.20754
DRIVECUR   DRIVE <CURRENT SUPERVISOR>        0.39224    0.15386   0.03641     0.19194      878.9177          0.19948
IGPA       HS UNDERGRADUATE GPS <1.0-4.0>    0.40114    0.16093   0.00707    -0.06735     -2179.097         -0.13445
ISH        ACADEMIC HONORS                   0.41208    0.16981   0.00889     0.11195      1833.859          0.10600
PHD                                          0.41320    0.17073   0.00092     0.00179     -1303.775         -0.03819
MA                                           0.41372    0.17117   0.00043     0.12532      441.6206          0.02556
(CONSTANT)                                                                                 14622.84
```

```
VARIABLE                                    MULTIPLE R  R SQUARE  RSQ CHANGE  SIMPLE R           B              BETA

CETCH12                                      0.45364    0.20579   0.20579     0.45364      19.19277          0.41954
IGPA       HS UNDERGRADUATE GPS <1.0-4.0>    0.47241    0.22317   0.01738     0.12752      1945.305          0.09979
CEBUS12                                      0.48692    0.23709   0.01392     0.16870      20.85096          0.12045
PHD                                          0.49205    0.24212   0.00503     0.16173      2979.177          0.07255
DRIVECUR   DRIVE <CURRENT SUPERVISOR>        0.49695    0.24696   0.00485     0.06277      374.1882          0.07061
ISH        ACADEMIC HONORS                   0.49735    0.24735   0.00039     0.17346      484.3964          0.02306
(CONSTANT)                                                                                 9739.003
```

```
VARIABLE                                    MULTIPLE R  R SQUARE  RSQ CHANGE  SIMPLE R           B              BETA

CETCH15                                      0.32431    0.10518   0.10518     0.32431      11.42382          0.23126
CEBUS15                                      0.37965    0.14413   0.03896     0.26064      35.09501          0.20659
PHD                                          0.41961    0.17607   0.03194     0.22163      7701.088          0.16464
ISH        ACADEMIC HONORS                   0.42723    0.18253   0.00645     0.18067      1569.467          0.06559
IGPA       HS UNDERGRADUATE GPS <1.0-4.0>    0.42793    0.18313   0.00060     0.10071      620.9216          0.02796
DRIVECUR   DRIVE <CURRENT SUPERVISOR>        0.42821    0.18336   0.00024    -0.01754     -99.31464         -0.01645
MA                                           0.42836    0.18349   0.00013     0.22558      336.4913          0.01421
(CONSTANT)                                                                                 20874.52
```

```
VARIABLE                                    MULTIPLE R  R SQUARE  RSQ CHANGE  SIMPLE R           B              BETA

CEBUS18                                      0.35631    0.12696   0.12696     0.35631      52.06364          0.30129
CETCH18                                      0.44101    0.19449   0.06753     0.33551      12.23730          0.21858
PHD                                          0.46476    0.21600   0.02151     0.19428      7600.576          0.13963
DRIVECUR   DRIVE <CURRENT SUPERVISOR>        0.48382    0.23408   0.01808     0.13136      939.0904          0.13367
IGPA       HS UNDERGRADUATE GPS <1.0-4.0>    0.48532    0.23554   0.00145     0.02760     -1350.427         -0.05226
MA                                           0.48779    0.23794   0.00240     0.23970      1610.069          0.05843
(CONSTANT)                                                                                 19715.46
```

MULTIPLE REGRESSION - ALL COMBINED
vs. OAC

APPENDIX 15A

```
VARIABLE                                        ORC03   MULTIPLE R  R SQUARE  RSQ CHANGE  SIMPLE R            B              BETA

CECRX03   TECH. CE <NON-CREDIT>                           0.15673    0.02456    0.02456     0.15673     0.1116454D-01      0.28319
CECRT03   CE TECH HRS FOR CREDIT                          0.25265    0.06383    0.03927    -0.08274    -0.3174220D-01     -0.23508
(CONSTANT)                                                                                             -0.3505564


VARIABLE                                        ORC06   MULTIPLE R  R SQUARE  RSQ CHANGE  SIMPLE R            B              BETA

CECRT06   CE TECH HRS FOR CREDIT                          0.16090    0.02589    0.02589     0.16090     0.3476236D-01      0.17414
CECRX06   TECH. CE <NON-CREDIT>                           0.16441    0.02703    0.00114     0.02724    -0.1264851D-02     -0.03630
(CONSTANT)                                                                                              0.3882317D-01


VARIABLE                                        ORC09   MULTIPLE R  R SQUARE  RSQ CHANGE  SIMPLE R            B              BETA

CECRX09   TECH. CE <NON-CREDIT>                           0.24611    0.06057    0.06057     0.24611     0.5375131D-02      0.28155
CECRT09   CE TECH HRS FOR CREDIT                          0.37201    0.13839    0.07782    -0.24573    -0.6952439D-01     -0.28121
(CONSTANT)                                                                                             -0.3383423


VARIABLE                                        ORC12   MULTIPLE R  R SQUARE  RSQ CHANGE  SIMPLE R            B              BETA

CECRX12   TECH. CE <NON-CREDIT>                           0.11658    0.01359    0.01359     0.11658     0.1777907D-02      0.14548
CECRT12   CE TECH HRS FOR CREDIT                          0.18022    0.03248    0.01889    -0.11050    -0.1544218D-01     -0.14043
(CONSTANT)                                                                                             -0.3335045


VARIABLE                                        ORC15   MULTIPLE R  R SQUARE  RSQ CHANGE  SIMPLE R            B              BETA

CECRX15   TECH. CE <NON-CREDIT>                           0.09740    0.00949    0.00949    -0.09740    -0.5881426D-02     -0.09058
CECRT15   CE TECH HRS FOR CREDIT                          0.10508    0.01104    0.00155    -0.05545    -0.3880219D-01     -0.04002
(CONSTANT)                                                                                              1.815716


VARIABLE                                        ORC18   MULTIPLE R  R SQUARE  RSQ CHANGE  SIMPLE R            B              BETA

CECRX18   TECH. CE <NON-CREDIT>                           0.13037    0.01700    0.01700    -0.13037    -0.5385266D-02     -0.14314
CECRT18   CE TECH HRS FOR CREDIT                          0.16030    0.02569    0.00870     0.07471     0.5266676D-01      0.09414
(CONSTANT)                                                                                              0.7438138
```

MULTIPLE REGRESSION - FORD
VS. ORC (CETECH HOURS NON-CREDIT VS. CREDIT)

APPENDIX 15B

```
VARIABLE                                 ORC03     MULTIPLE R  R SQUARE  RSQ CHANGE  SIMPLE R            B                    BETA

CETCH03   TECH. CE <NOT AT EMPLOYERS>               0.08767    0.00769    0.00769     0.08767    0.26213750D-02          0.07636
CEMET03   CE TECH HOURS AT EMPLOYERS                0.10293    0.01059    0.00291     0.07078    0.16287570D-01          0.05810
(CONSTANT)                                                                                      -0.3396666


VARIABLE                                 ORC06     MULTIPLE R  R SQUARE  RSQ CHANGE  SIMPLE R            B                    BETA

CETCH06   TECH. CE <NOT AT EMPLOYERS>               0.05539    0.00307    0.00307     0.05539    0.18129700D-02          0.05573
CEMET06   CE TECH HOURS AT EMPLOYERS                0.06352    0.00404    0.00097     0.03050    0.93574030D-02          0.03110
(CONSTANT)                                                                                       0.42888320D-01


VARIABLE                                 ORC09     MULTIPLE R  R SQUARE  RSQ CHANGE  SIMPLE R            B                    BETA

CETCH09   TECH. CE <NOT AT EMPLOYERS>               0.22857    0.05224    0.05224     0.22857    0.41449610D-02          0.21664
CEMET09   CE TECH HOURS AT EMPLOYERS                0.23780    0.05655    0.00431     0.10545    0.18224860D-01          0.06670
(CONSTANT)                                                                                      -0.4446305


VARIABLE                                 ORC12     MULTIPLE R  R SQUARE  RSQ CHANGE  SIMPLE R            B                    BETA

CETCH12   TECH. CE <NOT AT EMPLOYERS>               0.09511    0.00905    0.00905     0.09511    0.86425490D-03          0.07152
CEMET12   CE TECH HOURS AT EMPLOYERS                0.11338    0.01285    0.00381     0.09160    0.17569130D-01          0.06606
(CONSTANT)                                                                                      -0.3479923


VARIABLE                                 ORC15     MULTIPLE R  R SQUARE  RSQ CHANGE  SIMPLE R            B                    BETA

CETCH15   TECH. CE <NOT AT EMPLOYERS>               0.09666    0.00934    0.00934    -0.09666   -0.59620780D-02         -0.09285
CEMET15   CE TECH HOURS AT EMPLOYERS                0.11623    0.01351    0.00417    -0.07013   -0.1334877              -0.06466
(CONSTANT)                                                                                       1.841615


VARIABLE                                 ORC18     MULTIPLE R  R SQUARE  RSQ CHANGE  SIMPLE R            B                    BETA

CEMET18   CE TECH HOURS AT EMPLOYERS                0.28023    0.07853    0.07853     0.28023    0.3504278               0.30319
CETCH18   TECH. CE <NOT AT EMPLOYERS>               0.32917    0.10835    0.02982    -0.13426   -0.65116440D-02         -0.17421
(CONSTANT)                                                                                       0.6487179
```

MULTIPLE REGRESSION - FORD
VS. ORC (CETECH AT EMPLOYERS VS. NOT AT EMPLOYERS)

APPENDIX 15C

```
VARIABLE                                          ORC03  MULTIPLE R  R SQUARE  RSQ CHANGE  SIMPLE R          B                  BETA

CENOAC03   TECHNICAL CE <NON ACADEMIC INST>                 0.14821    0.02197    0.02197    0.14821    0.98812320D-02        0.24880
CELOCT03   CE TECH HRS ACADEMIC INSTR                       0.21334    0.04551    0.02355   -0.04708   -0.24234820D-01       -0.18348
(CONSTANT)                                                                                            -0.3383746


VARIABLE                                          ORC06  MULTIPLE R  R SQUARE  RSQ CHANGE  SIMPLE R          B                  BETA

CELOCT06   CE TECH HRS ACADEMIC INSTR                       0.16299    0.02657    0.02657    0.16299    0.32514170D-01        0.17427
CENOAC06   TECHNICAL CE <NON ACADEMIC INST>                 0.16612    0.02760    0.00103    0.02369   -0.11868220D-02       -0.03405
(CONSTANT)                                                                                             0.27102000D-01


VARIABLE                                          ORC09  MULTIPLE R  R SQUARE  RSQ CHANGE  SIMPLE R          B                  BETA

CENOAC09   TECHNICAL CE <NON ACADEMIC INST>                 0.24611    0.06057    0.06057    0.24611    0.49654410D-02        0.26193
CELOCT09   CE TECH HRS ACADEMIC INSTR                       0.35880    0.12874    0.06817   -0.24573   -0.81612150D-01       -0.26158
(CONSTANT)                                                                                            -0.3303445


VARIABLE                                          ORC12  MULTIPLE R  R SQUARE  RSQ CHANGE  SIMPLE R          B                  BETA

CENOAC12   TECHNICAL CE <NON ACADEMIC INST>                 0.11038    0.01219    0.01218    0.11038    0.15297150D-02        0.12613
CELOCT12   CE TECH HRS ACADEMIC INSTR                       0.14963    0.02239    0.01020   -0.08281   -0.12111710D-01       -0.10224
(CONSTANT)                                                                                            -0.3334807


VARIABLE                                          ORC15  MULTIPLE R  R SQUARE  RSQ CHANGE  SIMPLE R          B                  BETA

CENOAC15   TECHNICAL CE <NON ACADEMIC INST>                 0.10009    0.01002    0.01002   -0.10009   -0.62848770D-02       -0.09710
CELOCT15   CE TECH HRS ACADEMIC INSTR                       0.10283    0.01057    0.00056   -0.03595   -0.23470430D-01       -0.02378
(CONSTANT)                                                                                              1.813132


VARIABLE                                          ORC18  MULTIPLE R  R SQUARE  RSQ CHANGE  SIMPLE R          B                  BETA

CENOAC18   TECHNICAL CE <NON ACADEMIC INST>                 0.13092    0.01714    0.01714   -0.13092   -0.57335080D-02       -0.15136
CELOCT18   CE TECH HRS ACADEMIC INSTR                       0.15638    0.02446    0.00731    0.05276    0.48171700D-01        0.08793
(CONSTANT)                                                                                             0.7723539
```

MULTIPLE REGRESSION - FORD
VS. ORC (CETECH ACADEMIC INSTRUCTION VS. NON-ACADEMIC INSTRUCTION)

```
VARIABLE                                 OSP03     MULTIPLE R   R SQUARE   RSQ CHANGE   SIMPLE R            B                BETA

CECRX03    TECH. CE <NON-CREDIT>                     0.12161     0.01479     0.01479    -0.12161     -0.4258837D-01       -0.10261
CECRT03    CE TECH HRS FOR CREDIT                    0.12521     0.01568     0.00089    -0.09053     -0.5023228D-01       -0.03534
(CONSTANT)                                                                                             8.091772


VARIABLE                                 USP06     MULTIPLE R   R SQUARE   RSQ CHANGE   SIMPLE R            B                BETA

CECRX06    TECH. CE <NON-CREDIT>                     0.20414     0.04167     0.04167    -0.20414     -0.5044674D-01       -0.18963
CECRT06    CE TECH HRS FOR CREDIT                    0.20746     0.04304     0.00137    -0.10895     -0.6059400D-01       -0.03976
(CONSTANT)                                                                                            13.39584


VARIABLE                                 OSP09     MULTIPLE R   R SQUARE   RSQ CHANGE   SIMPLE R            B                BETA

CECRX09    TECH. CE <NON-CREDIT>                     0.18733     0.03509     0.03509    -0.18733     -0.3706257D-01       -0.17690
CECRT09    CE TECH HRS FOR CREDIT                    0.20453     0.04183     0.00674    -0.10506     -0.2245654           -0.08277
(CONSTANT)                                                                                            14.85586


VARIABLE                                 USP12     MULTIPLE R   R SQUARE   RSQ CHANGE   SIMPLE R            B                BETA

CECRX12    TECH. CE <NON-CREDIT>                     0.12660     0.01603     0.01603    -0.12660     -0.5441644D-01       -0.11700
CECRT12    CE TECH HRS FOR CREDIT                    0.13458     0.01811     0.00209    -0.07073     -0.1952753           -0.04666
(CONSTANT)                                                                                            29.63264


VARIABLE                                 USP15     MULTIPLE R   R SQUARE   RSQ CHANGE   SIMPLE R            B                BETA

CECRX15    TECH. CE <NON-CREDIT>                     0.10008     0.01002     0.01002    -0.10008     -0.1132346           -0.10008
(CONSTANT)                                                                                            57.62320


VARIABLE                                 OSP18     MULTIPLE R   R SQUARE   RSQ CHANGE   SIMPLE R            B                BETA

CECRX18    TECH. CE <NON-CREDIT>                     0.09991     0.00998     0.00998    -0.09991     -0.2809962D-01       -0.08869
CECRT18    CE TECH HRS FOR CREDIT                    0.12921     0.01669     0.00671    -0.09473     -0.3895858           -0.08269
(CONSTANT)                                                                                            32.38431
```

APPENDIX 15D

MULTIPLE REGRESSION - FORD
VS. OSP (CETECH HOURS NON-CREDIT VS. CREDIT)

```
VARIABLE                                       MULTIPLE R  R SQUARE  RSQ CHANGE  SIMPLE R          B            BETA

CECRX03    TECH. CE <NON-CREDIT>                 0.32269    0.10413   0.10413    -0.32269    -38.36611       -0.30036
CECRT03    CE TECH HRS FOR CREDIT                0.32748    0.10724   0.00312    -0.17163    -17.86931       -0.06014
(CONSTANT)                                                                                   15479.68


VARIABLE                                       MULTIPLE R  R SQUARE  RSQ CHANGE  SIMPLE R          B            BETA

CECRT06    CE TECH HRS FOR CREDIT                0.19815    0.03926   0.03926    -0.19815    -56.70634       -0.20235
CECRX06    TECH. CE <NON-CREDIT>                 0.19890    0.03956   0.00029    -0.03032    1.117902         0.01768
(CONSTANT)                                                                                   17455.51


VARIABLE                                       MULTIPLE R  R SQUARE  RSQ CHANGE  SIMPLE R          B            BETA

CECRT09    CE TECH HRS FOR CREDIT                0.24135    0.05825   0.05825    -0.24135    -149.6022       -0.23163
CECRX09    TECH. CE <NON-CREDIT>                 0.29119    0.08479   0.02654     0.17700    6.282234         0.16320
(CONSTANT)                                                                                   17214.59


VARIABLE                                       MULTIPLE R  R SQUARE  RSQ CHANGE  SIMPLE R          B            BETA

CECRX12    TECH. CE <NON-CREDIT>                 0.22060    0.04867   0.04867     0.22060     10.50111        0.26536
CECRT12    CE TECH HRS FOR CREDIT                0.31928    0.10194   0.05327    -0.18459    -66.79818       -0.23511
(CONSTANT)                                                                                   20918.03


VARIABLE                                       MULTIPLE R  R SQUARE  RSQ CHANGE  SIMPLE R          B            BETA

CECRT15    CE TECH HRS FOR CREDIT                0.11490    0.01320   0.01320    -0.11490    -90.61801       -0.13428
CECRX15    TECH. CE <NON-CREDIT>                 0.15361    0.02360   0.01039     0.07869    7.534364         0.10377
(CONSTANT)                                                                                   27094.15


VARIABLE                                       MULTIPLE R  R SQUARE  RSQ CHANGE  SIMPLE R          B            BETA

CECRT18    CE TECH HRS FOR CREDIT                0.22207    0.04932   0.04932    -0.22207    -95.52030       -0.20495
CECRX18    TECH. CE <NON-CREDIT>                 0.25219    0.06360   0.01428    -0.14979    -6.070210       -0.12072
(CONSTANT)                                                                                   30442.00
```

APPENDIX 15E

MULTIPLE REGRESSION - FORD
VS. OAC (CETECH HOURS NON-CREDIT VS. CREDIT)

APPENDIX 16A

```
VARIABLE                                        ORC03   MULTIPLE R  R SQUARE  RSQ CHANGE  SIMPLE R              B               BETA

CECRX03    TECH. CE <NON-CREDIT>                          0.04809    0.00231    0.00231    0.04809      0.1791839D-02         0.04809
(CONSTANT)                                                                                               1.519937


VARIABLE                                        ORC06   MULTIPLE R  R SQUARE  RSQ CHANGE  SIMPLE R              B               BETA

CECRX06    TECH. CE <NON-CREDIT>                          0.37361    0.13959    0.13959    0.37361      0.3811336D-02         0.31996
CECRT06    CE TECH HRS FOR CREDIT                         0.38780    0.15039    0.01081    0.26372      0.7599820D-02         0.11699
(CONSTANT)                                                                                               1.336479


VARIABLE                                        ORC09   MULTIPLE R  R SQUARE  RSQ CHANGE  SIMPLE R              B               BETA

CECRX09    TECH. CE <NON-CREDIT>                          0.43652    0.19055    0.19055    0.43652      0.3681430D-02         0.41948
CECRT09    CE TECH HRS FOR CREDIT                         0.43951    0.19325    0.00270    0.18536      0.5309349D-02         0.05471
(CONSTANT)                                                                                              0.1662093


VARIABLE                                        ORC12   MULTIPLE R  R SQUARE  RSQ CHANGE  SIMPLE R              B               BETA

CECRX12    TECH. CE <NON-CREDIT>                          0.52153    0.27200    0.27200    0.52153      0.2610973D-02         0.52302
CECRT12    CE TECH HRS FOR CREDIT                         0.53337    0.28449    0.01249   -0.10480     -0.5279605D-02        -0.11177
(CONSTANT)                                                                                             -0.1613857


VARIABLE                                        ORC15   MULTIPLE R  R SQUARE  RSQ CHANGE  SIMPLE R              B               BETA

CECRX15    TECH. CE <NON-CREDIT>                          0.38685    0.14965    0.14965    0.38685      0.1984896D-02         0.38984
CECRT15    CE TECH HRS FOR CREDIT                         0.38828    0.15076    0.00110    0.00157     -0.2913852D-02        -0.03335
(CONSTANT)                                                                                             -0.9276876


VARIABLE                                        ORC18   MULTIPLE R  R SQUARE  RSQ CHANGE  SIMPLE R              B               BETA

CECRX18    TECH. CE <NON-CREDIT>                          0.43155    0.18623    0.18623    0.43155      0.1934873D-02         0.44021
CECRT18    CE TECH HRS FOR CREDIT                         0.47083    0.22168    0.03545    0.16825      0.3496356D-01         0.18848
(CONSTANT)                                                                                             -1.381747
```

MULTIPLE REGRESSION - NASA
VS. ORC (CETECH HOURS NON-CREDIT VS. CREDIT)

```
VARIABLE                                    ORC03   MULTIPLE R  R SQUARE  RSQ CHANGE  SIMPLE R             B                 BETA

CEMET03    CE TECH HOURS AT EMPLOYERS                 0.12461   0.01553    0.01553   -0.12461   -0.3215066D-01      -0.12606
CETCH03    TECH. CE <NOT AT EMPLOYERS>                0.13712   0.01880    0.00328    0.05406    0.1360738D-02       0.05725
(CONSTANT)                                                                                        1.688341


VARIABLE                                    ORC06   MULTIPLE R  R SQUARE  RSQ CHANGE  SIMPLE R             B                 BETA

CETCH06    TECH. CE <NOT AT EMPLOYERS>                0.40257   0.16206    0.16206    0.40257    0.4589542D-02       0.41704
CEMET06    CE TECH HOURS AT EMPLOYERS                 0.40777   0.16628    0.00422    0.02416   -0.1384542D-01      -0.06653
(CONSTANT)                                                                                        1.336038


VARIABLE                                    ORC09   MULTIPLE R  R SQUARE  RSQ CHANGE  SIMPLE R             B                 BETA

CETCH09    TECH. CE <NOT AT EMPLOYERS>                0.43867   0.19243    0.19243    0.43867    0.3683468D-02       0.43276
CEMET09    CE TECH HOURS AT EMPLOYERS                 0.46473   0.21598    0.02355    0.17023    0.9125628D-01       0.15357
(CONSTANT)                                                                                       0.1396925


VARIABLE                                    ORC12   MULTIPLE R  R SQUARE  RSQ CHANGE  SIMPLE R             B                 BETA

CETCH12    TECH. CE <NOT AT EMPLOYERS>                0.51060   0.26071    0.26071    0.51060    0.2531817D-02       0.51065
CEMET12    CE TECH HOURS AT EMPLOYERS                 0.51858   0.26892    0.00821   -0.09036   -0.3173362D-01      -0.09061
(CONSTANT)                                                                                      -0.2105268


VARIABLE                                    ORC15   MULTIPLE R  R SQUARE  RSQ CHANGE  SIMPLE R             B                 BETA

CETCH15    TECH. CE <NOT AT EMPLOYERS>                0.38305   0.14673    0.14673    0.38305    0.1933540D-02       0.38236
CEMET15    CE TECH HOURS AT EMPLOYERS                 0.40253   0.16203    0.01530   -0.12585   -0.4118854D-01      -0.12371
(CONSTANT)                                                                                      -0.8910934


VARIABLE                                    ORC18   MULTIPLE R  R SQUARE  RSQ CHANGE  SIMPLE R             B                 BETA

CETCH18    TECH. CE <NOT AT EMPLOYERS>                0.43766   0.19154    0.19154    0.43766    0.1873317D-02       0.42598
CEMET18    CE TECH HOURS AT EMPLOYERS                 0.48198   0.23230    0.04076   -0.22681   -0.1811962          -0.20222
(CONSTANT)                                                                                        -1.279416
```

MULTIPLE REGRESSION - NASA
VS. ORC (CETECH AT EMPLOYERS VS. NOT AT EMPLOYERS)

```
VARIABLE                                        ORC03  MULTIPLE R  R SQUARE  RSQ CHANGE  SIMPLE R          B                 BETA

CENOAC03  TECHNICAL CE <NON ACADEMIC INST>               0.04809   0.00231    0.00231     0.04809    0.1867677D-02        0.04809
(CONSTANT)                                                                                            1.624709


VARIABLE                                        ORC06  MULTIPLE R  R SQUARE  RSQ CHANGE  SIMPLE R          B                 BETA

CENOAC06  TECHNICAL CE <NON ACADEMIC INST>               0.36389   0.13242    0.13242     0.36389    0.3497962D-02        0.28937
CELOCT06  CE TECH HRS ACADEMIC INSTR                     0.38966   0.15184    0.01942     0.29448    0.9243337D-02        0.15803
(CONSTANT)                                                                                            1.322578


VARIABLE                                        ORC09  MULTIPLE R  R SQUARE  RSQ CHANGE  SIMPLE R          B                 BETA

CENOAC09  TECHNICAL CE <NON ACADEMIC INST>               0.42825   0.18340    0.18340     0.42825    0.3309896D-02        0.37406
CELOCT09  CE TECH HRS ACADEMIC INSTR                     0.45192   0.20423    0.02084     0.28566    0.1336630D-01        0.15419
(CONSTANT)                                                                                           0.1336934


VARIABLE                                        ORC12  MULTIPLE R  R SQUARE  RSQ CHANGE  SIMPLE R          B                 BETA

CENOAC12  TECHNICAL CE <NON ACADEMIC INST>               0.52104   0.27148    0.27148     0.52104    0.2612348D-02        0.52303
CELOCT12  CE TECH HRS ACADEMIC INSTR                     0.53256   0.28362    0.01214    -0.10074   -0.5205711D-02       -0.11021
(CONSTANT)                                                                                          -0.1585407


VARIABLE                                        ORC15  MULTIPLE R  R SQUARE  RSQ CHANGE  SIMPLE R          B                 BETA

CENOAC15  TECHNICAL CE <NON ACADEMIC INST>               0.38986   0.15199    0.15199     0.38986    0.1997319D-02        0.39290
CELOCT15  CE TECH HRS ACADEMIC INSTR                     0.39443   0.15557    0.00358    -0.04004   -0.4735804D-02       -0.05995
(CONSTANT)                                                                                          -0.9141794


VARIABLE                                        ORC18  MULTIPLE R  R SQUARE  RSQ CHANGE  SIMPLE R          B                 BETA

CENOAC18  TECHNICAL CE <NON ACADEMIC INST>               0.43155   0.18623    0.18623     0.43155    0.1934833D-02        0.44021
CELOCT18  CE TECH HRS ACADEMIC INSTR                     0.47083   0.22168    0.03545     0.16825    0.3496356D-01        0.18848
(CONSTANT)                                                                                          -1.381747
```

MULTIPLE REGRESSION - NASA
VS. ORC (CETECH ACADEMIC INSTRUCTION VS. NON-ACADEMIC INSTRUCTION)

```
VARIABLE                                    OSP03    MULTIPLE R   R SQUARE   RSQ CHANGE   SIMPLE R             B                  BETA

CECRX03    TECH. CE <NON-CREDIT>                       0.24259    0.05885     0.05885    -0.24259     -0.3838301OD-01         -0.22849
CECRT03    CE TECH HRS FOR CREDIT                      0.24319    0.05914     0.00029    -0.16815     -0.5016995D-02          -0.02206
(CONSTANT)                                                                                             6.003099


VARIABLE                                    OSP06    MULTIPLE R   R SQUARE   RSQ CHANGE   SIMPLE R             B                  BETA

CECRX06    TECH. CE <NON-CREDIT>                       0.19911    0.03964     0.03964    -0.19911     -0.5777263D-02          -0.16338
CECRT06    CE TECH HRS FOR CREDIT                      0.21080    0.04444     0.00479    -0.15283     -0.1502346D-01          -0.07790
(CONSTANT)                                                                                             3.686380


VARIABLE                                    OSP09    MULTIPLE R   R SQUARE   RSQ CHANGE   SIMPLE R             B                  BETA

CECRT09    CE TECH HRS FOR CREDIT                      0.08766    0.00768     0.00768    -0.08766     -0.2277858              -0.06846
CECRX09    TECH. CE <NON-CREDIT>                       0.10544    0.01112     0.00343    -0.08299     -0.1855796D-01          -0.06167
(CONSTANT)                                                                                             24.56966


VARIABLE                                    OSP12    MULTIPLE R   R SQUARE   RSQ CHANGE   SIMPLE R             B                  BETA

CECRT12    CE TECH HRS FOR CREDIT                      0.07695    0.00592     0.00592    -0.07695     -0.1717923              -0.07754
CECRX12    TECH. CE <NON-CREDIT>                       0.08891    0.00791     0.00198     0.04352      0.1043126D-01           0.04455
(CONSTANT)                                                                                             17.34588


VARIABLE                                    OSP15    MULTIPLE R   R SQUARE   RSQ CHANGE   SIMPLE R             B                  BETA

CECRX15    TECH. CE <NON-CREDIT>                       0.06275    0.00394     0.00394    -0.06275     -0.1321163D-01          -0.06275
(CONSTANT)                                                                                             23.64563


VARIABLE                                    OSP18    MULTIPLE R   R SQUARE   RSQ CHANGE   SIMPLE R             B                  BETA

CECRX18    TECH. CE <NON-CREDIT>                       0.13475    0.01816     0.01816    -0.13475     -0.1034196D-01          -0.13556
CECRT18    CE TECH HRS FOR CREDIT                      0.13589    0.01847     0.00031    -0.01139     -0.5673539D-01          -0.01762
(CONSTANT)                                                                                             18.15408
```

MULTIPLE REGRESSION - NASA
VS. OSP (CETECH HOURS NON-CREDIT VS. CREDIT)

```
VARIABLE                                           MULTIPLE R  R SQUARE  RSQ CHANGE  SIMPLE R           B           BETA

CECRT03    CE TECH HRS FOR CREDIT                   0.30989    0.09603    0.09603   -0.30989   -69.50477      -0.55795
CECRX03    TECH. CE <NON-CREDIT>                    0.32872    0.10806    0.01203   -0.23909    22.38945       0.27122
(CONSTANT)                                                                                     16855.04


VARIABLE                                           MULTIPLE R  R SQUARE  RSQ CHANGE  SIMPLE R           B           BETA

CECRX06    TECH. CE <NON-CREDIT>                    0.02774    0.00077    0.00077    0.02774    1.127757       0.03493
CECRT06    CE TECH HRS FOR CREDIT                   0.03853    0.00148    0.00072   -0.01863   -4.297046      -0.02770
(CONSTANT)                                                                                     14631.29


VARIABLE                                           MULTIPLE R  R SQUARE  RSQ CHANGE  SIMPLE R           B           BETA

CECRX09    TECH. CE <NON-CREDIT>                    0.53308    0.28417    0.28417    0.53308    10.84772       0.50276
CECRT09    CE TECH HRS FOR CREDIT                   0.54530    0.29735    0.01318    0.24709    24.65349       0.11872
(CONSTANT)                                                                                     12938.18


VARIABLE                                           MULTIPLE R  R SQUARE  RSQ CHANGE  SIMPLE R           B           BETA

CECRX12    TECH. CE <NON-CREDIT>                    0.68825    0.47369    0.47369    0.68825    19.72864       0.57880
CECRT12    CE TECH HRS FOR CREDIT                   0.69661    0.48527    0.01157   -0.16742   -25.85322      -0.10800
(CONSTANT)                                                                                     16206.36


VARIABLE                                           MULTIPLE R  R SQUARE  RSQ CHANGE  SIMPLE R           B           BETA

CECRX15    TECH. CE <NON-CREDIT>                    0.62165    0.38645    0.38645    0.62165    20.28184       0.60720
CECRT15    CE TECH HRS FOR CREDIT                   0.62740    0.39363    0.00718    0.18804    32.40520       0.08594
(CONSTANT)                                                                                     18334.78


VARIABLE                                           MULTIPLE R  R SQUARE  RSQ CHANGE  SIMPLE R           B           BETA

CECRX18    TECH. CE <NON-CREDIT>                    0.61160    0.37406    0.37406    0.61160    31.45559       0.59652
CECRT18    CE TECH HRS FOR CREDIT                   0.62090    0.38551    0.01145    0.19135    142.1806       0.10808
(CONSTANT)                                                                                     22465.65
```

MULTIPLE REGRESSION - NASA
VS. OAC (CETECH HOURS NON-CREDIT VS. CREDIT)

```
VARIABLE                                ORC03    MULTIPLE R  R SQUARE  RSQ CHANGE  SIMPLE R             B                 BETA

CECRT03    CE TECH HRS FOR CREDIT                  0.21261    0.04520   0.04520     0.21261     0.1955310D-01          0.27587
CECRX03    TECH. CE <NON-CREDIT>                   0.22689    0.05148   0.00628     0.07075    -0.4900397D-02         -0.10139
(CONSTANT)                                                                                      1.199192


VARIABLE                                ORC06    MULTIPLE R  R SQUARE  RSQ CHANGE  SIMPLE R             B                 BETA

CECRT06    CE TECH HRS FOR CREDIT                  0.23663    0.05599   0.05599    -0.23663    -0.1875656D-01         -0.15126
CECRX06    TECH. CE <NON-CREDIT>                   0.25030    0.06265   0.00666    -0.22743    -0.2148723D-02         -0.11808
(CONSTANT)                                                                                      1.572202


VARIABLE                                ORC09    MULTIPLE R  R SQUARE  RSQ CHANGE  SIMPLE R             B                 BETA

CECRT09    CE TECH HRS FOR CREDIT                  0.12774    0.01632   0.01632     0.12774     0.2802357D-01          0.13375
CECRX09    TECH. CE <NON-CREDIT>                   0.14281    0.02040   0.00408    -0.05160    -0.8121208D-03         -0.06414
(CONSTANT)                                                                                      0.5914576


VARIABLE                                ORC12    MULTIPLE R  R SQUARE  RSQ CHANGE  SIMPLE R             B                 BETA

CECRX12    TECH. CE <NON-CREDIT>                   0.43308    0.18756   0.18756     0.43308     0.7701648D-02          0.49306
CECRT12    CE TECH HRS FOR CREDIT                  0.46428    0.21555   0.02800    -0.01138    -0.4593762D-01         -0.17775
(CONSTANT)                                                                                     -0.2560462


VARIABLE                                ORC15    MULTIPLE R  R SQUARE  RSQ CHANGE  SIMPLE R             B                 BETA

CECRT15    CE TECH HRS FOR CREDIT                  0.28897    0.08350   0.08350     0.28897     0.3637141              0.27869
CECRX15    TECH. CE <NON-CREDIT>                   0.31325    0.09812   0.01462     0.14497     0.1805784D-02          0.12134
(CONSTANT)                                                                                     -0.8743207D-01


VARIABLE                                ORC18    MULTIPLE R  R SQUARE  RSQ CHANGE  SIMPLE R             B                 BETA

CECRX18    TECH. CE <NON-CREDIT>                   0.18315    0.03354   0.03354     0.18315     0.2328505D-02          0.16017
CECRT18    CE TECH HRS FOR CREDIT                  0.22161    0.04911   0.01557     0.15588     0.3507865D-01          0.12688
(CONSTANT)                                                                                     -0.1064604
```

APPENDIX 17A

MULTIPLE REGRESSION - FMC
VS. ORC (CETECH HOURS NON-CREDIT VS. CREDIT)

```
VARIABLE                                       ORC03   MULTIPLE R   R SQUARE   RSQ CHANGE   SIMPLE R            B                 BETA

CETCH03    TECH. CE <NOT AT EMPLOYERS>                   0.15218    0.02316     0.02316     0.15218    0.4718954D-02          0.14862
CEMET03    CE TECH HOURS AT EMPLOYERS                    0.20537    0.04218     0.01902    -0.14179   -0.3972927             -0.13795
(CONSTANT)                                                                                              1.187116


VARIABLE                                       ORC06   MULTIPLE R   R SQUARE   RSQ CHANGE   SIMPLE R            B                 BETA

CETCH06    TECH. CE <NOT AT EMPLOYERS>                   0.24285    0.05898     0.05898    -0.24285   -0.4181347D-02         -0.25360
CEMET06    CE TECH HOURS AT EMPLOYERS                    0.31400    0.09860     0.03962     0.18566    0.4601774D-01          0.19934
(CONSTANT)                                                                                              1.530196


VARIABLE                                       ORC09   MULTIPLE R   R SQUARE   RSQ CHANGE   SIMPLE R            B                 BETA

CEMET09    CE TECH HOURS AT EMPLOYERS                    0.30711    0.09432     0.09432     0.30711    0.4840758D-01          0.31358
CETCH09    TECH. CE <NOT AT EMPLOYERS>                   0.32408    0.10503     0.01071    -0.08412   -0.1314008D-02         -0.10367
(CONSTANT)                                                                                             0.5713845


VARIABLE                                       ORC12   MULTIPLE R   R SQUARE   RSQ CHANGE   SIMPLE R            B                 BETA

CETCH12    TECH. CE <NOT AT EMPLOYERS>                   0.41776    0.17452     0.17452     0.41776    0.6388331D-02          0.41664
CEMET12    CE TECH HOURS AT EMPLOYERS                    0.41846    0.17511     0.00058     0.04342    0.8060743D-02          0.02421
(CONSTANT)                                                                                            -0.2526931


VARIABLE                                       ORC15   MULTIPLE R   R SQUARE   RSQ CHANGE   SIMPLE R            B                 BETA

CETCH15    TECH. CE <NOT AT EMPLOYERS>                   0.15435    0.02382     0.02382     0.15435    0.3236926D-02          0.21518
CEMET15    CE TECH HOURS AT EMPLOYERS                    0.23083    0.05328     0.02946    -0.11029   -0.7811101D-01         -0.18207
(CONSTANT)                                                                                            -0.7309428D-01


VARIABLE                                       ORC18   MULTIPLE R   R SQUARE   RSQ CHANGE   SIMPLE R            B                 BETA

CETCH18    TECH. CE <NOT AT EMPLOYERS>                   0.20342    0.04138     0.04138     0.20342    0.3136075D-02          0.21483
CEMET18    CE TECH HOURS AT EMPLOYERS                    0.21171    0.04482     0.00344    -0.01878   -0.1293284D-01         -0.05978
(CONSTANT)                                                                                            -0.1125764
```

APPENDIX 17B

MULTIPLE REGRESSION - FMC
VS. ORC (CETECH AT EMPLOYERS VS. NOT AT EMPLOYERS)

```
VARIABLE                                    ORC03  MULTIPLE R   R SQUARE   RSQ CHANGE    SIMPLE R               B                  BETA

CELOCT03   CE TECH HRS ACADEMIC INSTR                0.29607     0.08766     0.08766      0.29607       0.34592090D-01          0.49163
CENOAC03   TECHNICAL CE <NON ACADEMIC INST>          0.36889     0.13608     0.04842      0.03219      -0.14574130D-01         -0.29440
(CONSTANT)                                                                                               1.212438


VARIABLE                                    ORC06  MULTIPLE R   R SQUARE   RSQ CHANGE    SIMPLE R               B                  BETA

CELOCT06   CE TECH HRS ACADEMIC INSTR                0.25008     0.06254     0.06254     -0.25008      -0.22814290D-01         -0.18378
CENOAC06   TECHNICAL CE <NON ACADEMIC INST>          0.25785     0.06649     0.00395     -0.22473      -0.16626810D-02         -0.09135
(CONSTANT)                                                                                               1.564507


VARIABLE                                    ORC09  MULTIPLE R   R SQUARE   RSQ CHANGE    SIMPLE R               B                  BETA

CELOCT09   CE TECH HRS ACADEMIC INSTR                0.21189     0.04490     0.04490      0.21189       0.30197340D-01          0.21382
CENOAC09   TECHNICAL CE <NON ACADEMIC INST>          0.22497     0.05061     0.00571     -0.07016      -0.95615950D-03         -0.07560
(CONSTANT)                                                                                              0.5742838


VARIABLE                                    ORC12  MULTIPLE R   R SQUARE   RSQ CHANGE    SIMPLE R               B                  BETA

CENOAC12   TECHNICAL CE <NON ACADEMIC INST>          0.43214     0.18675     0.18675      0.43214       0.69925590D-02          0.44777
CELOCT12   CE TECH HRS ACADEMIC INSTR                0.44096     0.19445     0.00770     -0.01059      -0.14218590D-01         -0.08912
(CONSTANT)                                                                                             -0.2388077


VARIABLE                                    ORC15  MULTIPLE R   R SQUARE   RSQ CHANGE    SIMPLE R               B                  BETA

CENOAC15   TECHNICAL CE <NON ACADEMIC INST>          0.15720     0.02471     0.02471      0.15720       0.23324540D-02          0.15657
CELOCT15   CE TECH HRS ACADEMIC INSTR                0.16370     0.02680     0.00209     -0.04781      -0.85810440D-02         -0.04567
(CONSTANT)                                                                                             -0.56477130D-01


VARIABLE                                    ORC18  MULTIPLE R   R SQUARE   RSQ CHANGE    SIMPLE R               B                  BETA

CENOAC18   TECHNICAL CE <NON ACADEMIC INST>          0.19630     0.03853     0.03853      0.19630       0.28392380D-02          0.19630
(CONSTANT)                                                                                             -0.1141479
```

APPENDIX 17C

MULTIPLE REGRESSION - FMC
VS. ORC (CETECH ACADEMIC INSTRUCTION VS. NON-ACADEMIC INSTRUCTION)

```
VARIABLE                                 OSP03    MULTIPLE R  R SQUARE  RSQ CHANGE   SIMPLE R              B                  BETA

CECRX03   TECH. CE <NON-CREDIT>                    0.14965   0.02240    0.02240    -0.14965     -0.1590823D-01        -0.14965
(CONSTANT)                                                                                      2.366277


VARIABLE                                 OSP06    MULTIPLE R  R SQUARE  RSQ CHANGE   SIMPLE R              B                  BETA

CECRX06   TECH. CE <NON-CREDIT>                    0.10991   0.01208    0.01208    -0.10991     -0.2343602D-01        -0.10991
(CONSTANT)                                                                                      7.101484


VARIABLE                                 OSP09    MULTIPLE R  R SQUARE  RSQ CHANGE   SIMPLE R              B                  BETA

CECRX09   TECH. CE <NON-CREDIT>                    0.11161   0.01246    0.01246    -0.11161     -0.3815498D-01        -0.10480
CECRT09   CE TECH HRS FOR CREDIT                   0.13297   0.01768    0.00522    -0.08242     -0.4373003            -0.07259
(CONSTANT)                                                                                     12.04320


VARIABLE                                 OSP12    MULTIPLE R  R SQUARE  RSQ CHANGE   SIMPLE R              B                  BETA

CECRT12   CE TECH HRS FOR CREDIT                   0.08495   0.00722    0.00722    -0.08495     -0.2947440            -0.08495
(CONSTANT)                                                                                     10.21986


VARIABLE                                 OSP15    MULTIPLE R  R SQUARE  RSQ CHANGE   SIMPLE R              B                  BETA

CECRT15   CE TECH HRS FOR CREDIT                   0.04295   0.00184    0.00184    -0.04295     -0.5774020            -0.04425
CECRX15   TECH. CE <NON-CREDIT>                    0.04560   0.00208    0.00023     0.01162      0.2287135D-02         0.01537
(CONSTANT)                                                                                     10.21967


VARIABLE                                 OSP18    MULTIPLE R  R SQUARE  RSQ CHANGE   SIMPLE R              B                  BETA

CECRX18   TECH. CE <NON-CREDIT>                    0.21002   0.04411    0.04411     0.21002      0.3542582D-01         0.23823
CECRT18   CE TECH HRS FOR CREDIT                   0.23697   0.05615    0.01204    -0.06989     -0.3265511            -0.11159
(CONSTANT)                                                                                     10.77629
```

APPENDIX 17D

MULTIPLE REGRESSION - FMC
VS. OSP (CETECH HOURS NON-CREDIT VS. CREDIT)

```
VARIABLE                                         MULTIPLE R  R SQUARE  RSQ CHANGE  SIMPLE R          B          BETA

CECRX03    TECH. CE <NON-CREDIT>                  0.31225    0.09750    0.09750    0.31225      49.46812      0.37002
CECRT03    CE TECH HRS FOR CREDIT                 0.40803    0.16649    0.06899    0.18945      101.3280      0.26894
(CONSTANT)                                                                                      18628.72


VARIABLE                                         MULTIPLE R  R SQUARE  RSQ CHANGE  SIMPLE R          B          BETA

CECRX06    TECH. CE <NON-CREDIT>                  0.10679    0.01140    0.01140    0.10679      36.63207      0.72521
CECRT06    CE TECH HRS FOR CREDIT                 0.29247    0.08554    0.07414   -0.01198     -155.7943     -0.67571
(CONSTANT)                                                                                      18077.80


VARIABLE                                         MULTIPLE R  R SQUARE  RSQ CHANGE  SIMPLE R          B          BETA

CECRX09    TECH. CE <NON-CREDIT>                  0.30686    0.09416    0.09416    0.30686      18.78284      0.31087
CECRT09    CE TECH HRS FOR CREDIT                 0.38733    0.15003    0.05587    0.23151      489.0313      0.23639
(CONSTANT)                                                                                      19161.95


VARIABLE                                         MULTIPLE R  R SQUARE  RSQ CHANGE  SIMPLE R          B          BETA

CECRX12    TECH. CE <NON-CREDIT>                  0.39534    0.15629    0.15629    0.39534      15.71749      0.30774
CECRT12    CE TECH HRS FOR CREDIT                 0.45929    0.21095    0.05465    0.35764      173.6526      0.24065
(CONSTANT)                                                                                      1650[illegible].77


VARIABLE                                         MULTIPLE R  R SQUARE  RSQ CHANGE  SIMPLE R          B          BETA

CECRX15    TECH. CE <NON-CREDIT>                  0.34616    0.11983    0.11983    0.34616      32.10628      0.38086
CECRT15    CE TECH HRS FOR CREDIT                 0.39722    0.15779    0.03796   -0.13111     -690.5860     -0.19789
(CONSTANT)                                                                                      19098.88


VARIABLE                                         MULTIPLE R  R SQUARE  RSQ CHANGE  SIMPLE R          B          BETA

CECRT18    CE TECH HRS FOR CREDIT                 0.09058    0.00820    0.00820   -0.09058     -325.1615     -0.10104
CECRX18    TECH. CE <NON-CREDIT>                  0.09443    0.00892    0.00071   -0.00823      4.303895      0.02865
(CONSTANT)                                                                                      24739.63
```

APPENDIX 17E

MULTIPLE REGRESSION - FMC
VS. OAC (CETECH HOURS NON-CREDIT VS. CREDIT)

```
VARIABLE                                  ORC03    MULTIPLE R  R SQUARE  RSQ CHANGE   SIMPLE R            B                 BETA

CECRT03     CE TECH HRS FOR CREDIT                  0.40414    0.16333    0.16333     -0.40414     -0.1596495              -1.22305
CECRX03     TECH. CE <NON-CREDIT>                   0.96613    0.93341    0.77009      0.36585      0.4727661D-01           1.20029
(CONSTANT)                                                                                          0.7871818


VARIABLE                                  ORC06    MULTIPLE R  R SQUARE  RSQ CHANGE   SIMPLE R            B                 BETA

CECRX06     TECH. CE <NON-CREDIT>                   0.19798    0.03920    0.03920     -0.19798     -0.4267748D-02          -0.21485
CECRT06     CE TECH HRS FOR CREDIT                  0.21876    0.04785    0.00866      0.05623      0.6102525D-02           0.09456
(CONSTANT)                                                                                          1.466612


VARIABLE                                  ORC09    MULTIPLE R  R SQUARE  RSQ CHANGE   SIMPLE R            B                 BETA

CECRT09     CE TECH HRS FOR CREDIT                  0.17202    0.02959    0.02959     -0.17202     -0.2144229D-01          -0.17202
(CONSTANT)                                                                                          1.235342


VARIABLE                                  ORC12    MULTIPLE R  R SQUARE  RSQ CHANGE   SIMPLE R            B                 BETA

CECRT12     CE TECH HRS FOR CREDIT                  0.13906    0.01934    0.01934     -0.13906     -0.7457159D-01          -0.20107
CECRX12     TECH. CE <NON-CREDIT>                   0.22575    0.05096    0.03163      0.12215      0.2843562D-02           0.18834
(CONSTANT)                                                                                         -0.4825267D-01


VARIABLE                                  ORC15    MULTIPLE R  R SQUARE  RSQ CHANGE   SIMPLE R            B                 BETA

CECRX15     TECH. CE <NON-CREDIT>                   0.23405    0.05478    0.05478      0.23405      0.2029862D-02           0.23077
CECRT15     CE TECH HRS FOR CREDIT                  0.24870    0.06185    0.00708      0.09318      0.1405440D-01           0.05418
(CONSTANT)                                                                                         -0.1851714


VARIABLE                                  ORC18    MULTIPLE R  R SQUARE  RSQ CHANGE   SIMPLE R            B                 BETA

CECRX18     TECH. CE <NON-CREDIT>                   0.22933    0.05259    0.05259      0.22933      0.2577695D-02           0.23143
CECRT18     CE TECH HRS FOR CREDIT                  0.25109    0.06305    0.01045      0.09752      0.2586889D-01           0.10226
(CONSTANT)                                                                                         -0.6616335
```

APPENDIX 18A

MULTIPLE REGRESSION - SYLVANIA
VS. ORC (CETECH HOURS NON-CREDIT VS. CREDIT)

```
VARIABLE                                      ORC03     MULTIPLE R   R SQUARE   RSQ CHANGE   SIMPLE R              B                  BETA

CETCH03    TECH. CE <NOT AT EMPLOYERS>                  0.15871      0.02519    0.02519      0.15871      0.5313939D-02           0.16463
CEMET03    CE TECH HOURS AT EMPLOYERS                   0.16164      0.02613    0.00094      0.0         -0.4378833D-01          -0.03121
(CONSTANT)                                                                                              0.8522638

VARIABLE                                      ORC06     MULTIPLE R   R SQUARE   RSQ CHANGE   SIMPLE R              B                  BETA

CETCH06    TECH. CE <NOT AT EMPLOYERS>                  0.12710      0.01616    0.01616     -0.12710     -0.2308044D-02          -0.12710
(CONSTANT)                                                                                              1.457712

VARIABLE                                      ORC09     MULTIPLE R   R SQUARE   RSQ CHANGE   SIMPLE R              B                  BETA

CETCH09    TECH. CE <NOT AT EMPLOYERS>                  0.07874      0.00620    0.00620     -0.07874     -0.1253367D-02          -0.07626
CEMET09    CE TECH HOURS AT EMPLOYERS                   0.08236      0.00678    0.00058     -0.03207     -0.8331117D-02          -0.02430
(CONSTANT)                                                                                              1.222650

VARIABLE                                      ORC12     MULTIPLE R   R SQUARE   RSQ CHANGE   SIMPLE R              B                  BETA

CEMET12    CE TECH HOURS AT EMPLOYERS                   0.14260      0.02034    0.02034     -0.14260     -0.1229107              -0.32515
CETCH12    TECH. CE <NOT AT EMPLOYERS>.                 0.28586      0.08172    0.06138      0.11487      0.4693736D-02           0.30775
(CONSTANT)                                                                                             -0.1311155

VARIABLE                                      ORC15     MULTIPLE R   R SQUARE   RSQ CHANGE   SIMPLE R              B                  BETA

CETCH15    TECH. CE <NOT AT EMPLOYERS>                  0.24806      0.06153    0.06153      0.24806      0.2505017D-02           0.27946
CEMET15    CE TECH HOURS AT EMPLOYERS                   0.26474      0.07009    0.00856     -0.00785     -0.1358734D-01          -0.09769
(CONSTANT)                                                                                             -0.1797491

VARIABLE                                      ORC18     MULTIPLE R   R SQUARE   RSQ CHANGE   SIMPLE R              B                  BETA

CETCH18    TECH. CE <NOT AT EMPLOYERS>                  0.24002      0.05761    0.05761      0.24002      0.2693553D-02           0.24145
CEMET18    CE TECH HOURS AT EMPLOYERS                   0.24162      0.05838    0.00077     -0.01545     -0.1208658D-01          -0.02784
(CONSTANT)                                                                                             -0.6251108
```

APPENDIX 18B

MULTIPLE REGRESSION - SYLVANIA
VS. ORC (CETECH AT EMPLOYERS VS. NOT AT EMPLOYERS)

```
VARIABLE                                       ORC03   MULTIPLE R  R SQUARE  RSQ CHANGE  SIMPLE R             B                 BETA

CELOCT03   CE TECH HRS ACADEMIC INSTR                    0.40414    0.16333   0.16333    -0.40414      -0.1596495             -1.22305
CENOAC03   TECHNICAL CE <NON ACADEMIC INST>              0.96613    0.93341   0.77009     0.36585       0.4727661D-01          1.20029
(CONSTANT)                                                                                             0.7871818


VARIABLE                                       ORC06   MULTIPLE R  R SQUARE  RSQ CHANGE  SIMPLE R             B                 BETA

CENOAC06   TECHNICAL CE <NON ACADEMIC INST>              0.19798    0.03920   0.03920    -0.19798      -0.4267221D-02         -0.21484
CELOCT06   CE TECH HRS ACADEMIC INSTR                    0.21875    0.04785   0.00865     0.05623       0.6101407D-02          0.09453
(CONSTANT)                                                                                             1.466317


VARIABLE                                       ORC09   MULTIPLE R  R SQUARE  RSQ CHANGE  SIMPLE R             B                 BETA

CELOCT09   CE TECH HRS ACADEMIC INSTR                    0.17731    0.03144   0.03144    -0.17731      -0.2092650D-01         -0.17731
(CONSTANT)                                                                                             1.250302


VARIABLE                                       ORC12   MULTIPLE R  R SQUARE  RSQ CHANGE  SIMPLE R             B                 BETA

CENOAC12   TECHNICAL CE <NON ACADEMIC INST>              0.12595    0.01586   0.01586     0.12595       0.2421065D-02          0.15933
CELOCT12   CE TECH HRS ACADEMIC INSTR                    0.18195    0.03311   0.01724    -0.09623      -0.2798449D-01         -0.13548
(CONSTANT)                                                                                            -0.2603367D-01


VARIABLE                                       ORC15   MULTIPLE R  R SQUARE  RSQ CHANGE  SIMPLE R             B                 BETA

CENOAC15   TECHNICAL CE <NON ACADEMIC INST>              0.23443    0.05496   0.05496     0.23443       0.1983465D-02          0.22238
CELOCT15   CE TECH HRS ACADEMIC INSTR                    0.24312    0.05911   0.00415     0.10641       0.7406581D-02          0.06554
(CONSTANT)                                                                                            -0.1851714


VARIABLE                                       ORC18   MULTIPLE R  R SQUARE  RSQ CHANGE  SIMPLE R             B                 BETA

CENOAC18   TECHNICAL CE <NON ACADEMIC INST>              0.22356    0.04998   0.04998     0.22356       0.2452398D-02          0.21966
CELOCT18   CE TECH HRS ACADEMIC INSTR                    0.27304    0.07455   0.02457     0.16226       0.3588304D-01          0.15680
(CONSTANT)                                                                                            -0.6919222
```

MULTIPLE REGRESSION - SYLVANIA
VS. ORC (CETECH ACADEMIC INSTRUCTION VS. NON-ACADEMIC INSTRUCTION)

```
VARIABLE                                    OSP03     MULTIPLE R  R SQUARE  RSQ CHANGE  SIMPLE R              B                  BETA

CECRT03    CE TECH HRS FOR CREDIT                        0.07445   0.00554    0.00554    -0.07445     -0.1062579               -0.05141
CECRX03    TECH. CE <NON-CREDIT>                         0.07844   0.00615    0.00061    -0.06885     -0.2106608D-01           -0.03377
(CONSTANT)                                                                                             11.44411


VARIABLE                                    OSP06     MULTIPLE R  R SQUARE  RSQ CHANGE  SIMPLE R              B                  BETA

CECRX06    TECH. CE <NON-CREDIT>                         0.17374   0.03019    0.03019    -0.17374     -0.9548842D-02           -0.15840
CECRT06    CE TECH HRS FOR CREDIT                        0.20104   0.04042    0.01023    -0.13052     -0.2052142D-01           -0.10279
(CONSTANT)                                                                                             4.660082


VARIABLE                                    OSP09     MULTIPLE R  R SQUARE  RSQ CHANGE  SIMPLE R              B                  BETA

CECRT09    CE TECH HRS FOR CREDIT                        0.10648   0.01134    0.01134    -0.10648     -0.1109922               -0.10648
(CONSTANT)                                                                                             10.63073


VARIABLE                                    OSP12     MULTIPLE R  R SQUARE  RSQ CHANGE  SIMPLE R              B                  BETA

CECRX12    TECH. CE <NON-CREDIT>                         0.09854   0.00971    0.00971    -0.09854     -0.1090022D-01           -0.07704
CECRT12    CE TECH HRS FOR CREDIT                        0.11624   0.01351    0.00380    -0.09066     -0.2269373               -0.06530
(CONSTANT)                                                                                             14.92492


VARIABLE                                    OSP15     MULTIPLE R  R SQUARE  RSQ CHANGE  SIMPLE R              B                  BETA

CECRX15    TECH. CE <NON-CREDIT>                         0.13171   0.01735    0.01735    -0.13171     -0.1579775D-01           -0.12936
CECRT15    CE TECH HRS FOR CREDIT                        0.14481   0.02097    0.00362    -0.06528     -0.1396175               -0.06023
(CONSTANT)                                                                                             17.11177


VARIABLE                                    OSP18     MULTIPLE R  R SQUARE  RSQ CHANGE  SIMPLE R              B                  BETA

CECRT18    CE TECH HRS FOR CREDIT                        0.29600   0.08762    0.08762     0.29600      0.8752133                0.29885
CECRX18    TECH. CE <NON-CREDIT>                         0.29682   0.08810    0.00048    -0.02801     -0.2863016D-02           -0.02196
(CONSTANT)                                                                                             15.29899
```

APPENDIX 18D

MULTIPLE REGRESSION - SYLVANIA
VS. OSP (CETECH HOURS NON-CREDIT VS. CREDIT)

```
VARIABLE                                          MULTIPLE R  R SQUARE  RSQ CHANGE   SIMPLE R            B                 BETA

CECRT03     CE TECH HRS FOR CREDIT                  0.19467    0.03790    0.03790    -0.19467      -50.58907              -0.18802
CECRX03     TECH. CE <NON-CREDIT>                   0.21355    0.04560    0.00771     0.10224       11.42569               0.08804
(CONSTANT)                                                                                         14507.23


VARIABLE
                                                  MULTIPLE R  R SQUARE  RSQ CHANGE   SIMPLE R            B                 BETA
CECRX06     TECH. CE <NON-CREDIT>
CECRT06     CE TECH HRS FOR CREDIT                  0.07968    0.00635    0.00635     0.07968       7.407411               0.10280
(CONSTANT)                                          0.09049    0.00819    0.00184     0.00006      -6.755681              -0.04871
                                                                                                   17075.39


VARIABLE                                          MULTIPLE R  R SQUARE  RSQ CHANGE   SIMPLE R            B                 BETA

CECRT09     CE TECH HRS FOR CREDIT                  0.50649    0.25653    0.25653     0.50649       116.5757               0.47095
CECRX09     TECH. CE <NON-CREDIT>                   0.51190    0.26204    0.00551     0.28561       3.133066               0.08232
(CONSTANT)                                                                                         18486.66


VARIABLE                                          MULTIPLE R  R SQUARE  RSQ CHANGE   SIMPLE R            B                 BETA

CECRT12     CE TECH HRS FOR CREDIT                  0.39989    0.15991    0.15991     0.39989       187.7855               0.30086
CECRX12     TECH. CE <NON-CREDIT>                   0.43422    0.18855    0.02864     0.34803       8.232227               0.19607
(CONSTANT)                                                                                         21661.65


                                                  MULTIPLE R  R SQUARE  RSQ CHANGE   SIMPLE R            B                 BETA
VARIABLE
                                                    0.42877    0.18384    0.18384     0.42877       27.05097               0.44330
CECRX15     TECH. CE <NON-CREDIT>                   0.47350    0.22420    0.04036    -0.16944      -85.75112              -0.20142
CECRT15     CE TECH HRS FOR CREDIT                                                                 23546.16
(CONSTANT)


                                                  MULTIPLE R  R SQUARE  RSQ CHANGE   SIMPLE R            B                 BETA
VARIABLE
                                                    0.57722    0.33318    0.33318     0.57722       34.49804               0.53299
CECRX18     TECH. CE <NON-CREDIT>                   0.62155    0.38633    0.05315    -0.33517      -177.1017              -0.23474
CECRT18     CE TECH HRS FOR CREDIT                                                                 29011.95
(CONSTANT)
```

APPENDIX 18E

MULTIPLE REGRESSION - SYLVANIA
VS. OAC (CETECH HOURS NON-CREDIT VS. CREDIT)

```
VARIABLE                                URC03   MULTIPLE R  R SQUARE  RSQ CHANGE  SIMPLE R            B              BETA

CECRX03    TECH. CE <NON-CREDIT>                 0.17240    0.02972   0.02972     0.17240     0.8834908D-02      0.20990
CECRT03    CE TECH HRS FUR CREDIT                0.18002    0.03240   0.00268     0.05912    -0.5166606D-02     -0.06396
(CONSTANT)                                                                                    0.6228632


VARIABLE                                URC06   MULTIPLE R  R SQUARE  RSQ CHANGE  SIMPLE R            B              BETA

CECRT06    CE TECH HRS FOR CREDIT                0.17892    0.03201   0.03201     0.17892     0.1359307D-01      0.13013
CECRX06    TECH. CE <NON-CREDIT>                 0.21099    0.04452   0.01251     0.17404     0.2615400D-02      0.12201
(CONSTANT)                                                                                    0.9066025


VARIABLE                                ORC09   MULTIPLE R  R SQUARE  RSQ CHANGE  SIMPLE R            B              BETA

CECRX09    TECH. CE <NON-CREDIT>                 0.25996    0.06758   0.06758     0.25996     0.3767286D-02      0.27718
CECRT09    CE TECH HRS FOR CREDIT                0.26499    0.07022   0.00264     0.03392    -0.7745737D-02     -0.05410
(CONSTANT)                                                                                    0.2713895


VARIABLE                                URC12   MULTIPLE R  R SQUARE  RSQ CHANGE  SIMPLE R            B              BETA

CECRX12    TECH. CE <NON-CREDIT>                 0.30048    0.09029   0.09029     0.30048     0.3157541D-02      0.32119
CECRT12    CE TECH HRS FOR CREDIT                0.32294    0.10429   0.01400    -0.06475    -0.1336201D-01     -0.12012
(CONSTANT)                                                                                   -0.1719071


VARIABLE                                URC15   MULTIPLE R  R SQUARE  RSQ CHANGE  SIMPLE R            B              BETA

CECRT15    CE TECH HRS FUR CREDIT                0.01423    0.00020   0.00020    -0.01423    -0.7696863D-02     -0.01423
(CONSTANT)                                                                                    0.3194258


VARIABLE                                URC18   MULTIPLE R  R SQUARE  RSQ CHANGE  SIMPLE R            B              BETA

CECRT18    CE TECH HRS FUR CREDIT                0.08634    0.00746   0.00746     0.08634     0.3430504D-01      0.08634
(CONSTANT)                                                                                   -0.2142894
```

MULTIPLE REGRESSION - ALL COMBINED
VS. ORC (CETECH HOURS NON-CREDIT VS. CREDIT)

```
VARIABLE                                        ORC03  MULTIPLE R  R SQUARE  RSQ CHANGE  SIMPLE R             B                BETA

CETCH03    TECH. CE <NOT AT EMPLOYERS>                   0.14987   0.02246    0.02246     0.14987    0.4927958D-02       0.15869
CEMET03    CE TECH HOURS AT EMPLOYERS                    0.16859   0.02842    0.00596    -0.05971   -0.2999584D-01      -0.07771
(CONSTANT)                                                                                             0.6572091


VARIABLE                                        ORC06  MULTIPLE R  R SQUARE  RSQ CHANGE  SIMPLE R             B                BETA

CETCH06    TECH. CE <NOT AT EMPLOYERS>                   0.19253   0.03707    0.03707     0.19253    0.3730565D-02       0.18948
CEMET06    CE TECH HOURS AT EMPLOYERS                    0.19517   0.03809    0.00102     0.05010    0.9317624D-02       0.03214
(CONSTANT)                                                                                             0.9075931


VARIABLE                                        ORC09  MULTIPLE R  R SQUARE  RSQ CHANGE  SIMPLE R             B                BETA

CETCH09    TECH. CE <NOT AT EMPLOYERS>                   0.25036   0.06268    0.06268     0.25036    0.3219711D-02       0.24398
CEMET09    CE TECH HOURS AT EMPLOYERS                    0.26563   0.07056    0.00788     0.10647    0.2682766D-01       0.08897
(CONSTANT)                                                                                             0.2480351


VARIABLE                                        ORC12  MULTIPLE R  R SQUARE  RSQ CHANGE  SIMPLE R             B                BETA

CETCH12    TECH. CE <NOT AT EMPLOYERS>                   0.28941   0.08376    0.08376     0.28941    0.3054800D-02       0.31404
CEMET12    CE TECH HOURS AT EMPLOYERS                    0.30414   0.09250    0.00874    -0.01669   -0.3066476D-01      -0.09670
(CONSTANT)                                                                                            -0.1880895


VARIABLE                                        ORC15  MULTIPLE R  R SQUARE  RSQ CHANGE  SIMPLE R             B                BETA

CEMET15    CE TECH HOURS AT EMPLOYERS                    0.04383   0.00192    0.00192    -0.04383   -0.3503030D-01      -0.04383
(CONSTANT)                                                                                             0.3454708


VARIABLE                                        ORC18  MULTIPLE R  R SQUARE  RSQ CHANGE  SIMPLE R             B                BETA

CEMET18    CE TECH HOURS AT EMPLOYERS                    0.18242   0.03328    0.03328     0.18242    0.1130049           0.18242
(CONSTANT)                                                                                            -0.2603127
```

MULTIPLE REGRESSION - ALL COMBINED
VS. ORC (CETECH AT EMPLOYERS VS. NOT AT EMPLOYERS)

```
VARIABLE                               ORC03       MULTIPLE R  R SQUARE  RSQ CHANGE   SIMPLE R              B                      BETA

CENOAC03    TECHNICAL CE <NON ACADEMIC INST>         0.16984    0.02884    0.02884     0.16984      0.8673505D-02            0.20181
CELOCT03    CE TECH HRS ACADEMIC INSTR               0.17514    0.03068    0.00183     0.06739     -0.4168130D-02           -0.05341
(CONSTANT)                                                                                          0.6315066

VARIABLE                               ORC06       MULTIPLE R  R SQUARE  RSQ CHANGE   SIMPLE R              B                      BETA

CELOCT06    CE TECH HRS ACADEMIC INSTR               0.19295    0.03723    0.03723     0.19295      0.1459731D-01            0.14823
CENOAC06    TECHNICAL CE <NON ACADEMIC INST>         0.21666    0.04694    0.00971     0.16948      0.2342882D-02            0.10823
(CONSTANT)                                                                                          0.9029518

VARIABLE                               ORC09       MULTIPLE R  R SQUARE  RSQ CHANGE   SIMPLE R              B                      BETA

CENOAC09    TECHNICAL CE <NON ACADEMIC INST>         0.25460    0.06482    0.06482     0.25460      0.3422328D-02            0.25032
CELOCT09    CE TECH HRS ACADEMIC INSTR               0.25487    0.06496    0.00014     0.09832      0.1638691D-02            0.01246
(CONSTANT)                                                                                          0.2654512

VARIABLE                               ORC12       MULTIPLE R  R SQUARE  RSQ CHANGE   SIMPLE R              B                      BETA

CENOAC12    TECHNICAL CE <NON ACADEMIC INST>         0.29932    0.08959    0.08959     0.29932      0.3107196D-02            0.31599
CELOCT12    CE TECH HRS ACADEMIC INSTR               0.31636    0.10008    0.01049    -0.05302     -0.1090112D-01           -0.10377
(CONSTANT)                                                                                         -0.1701175

VARIABLE                               ORC15       MULTIPLE R  R SQUARE  RSQ CHANGE   SIMPLE R              B                      BETA

CELOCT15    CE TECH HRS ACADEMIC INSTR               0.01874    0.00035    0.00035    -0.01874     -0.8198116D-02           -0.01874
(CONSTANT)                                                                                          0.3287160

VARIABLE                               ORC18       MULTIPLE R  R SQUARE  RSQ CHANGE   SIMPLE R              B                      BETA

CELOCT18    CE TECH HRS ACADEMIC INSTR               0.07716    0.00595    0.00595     0.07716      0.3010402D-01            0.07716
(CONSTANT)                                                                                         -0.2155918
```

APPENDIX 19C

MULTIPLE REGRESSION - ALL COMBINED
VS. ORC (CETECH ACADEMIC INSTRUCTION VS. NON-ACADEMIC INSTRUCTION)

```
VARIABLE                                 OSP03    MULTIPLE R   R SQUARE   RSQ CHANGE    SIMPLE R              B                 BETA

CECRX03     TECH. CE <NON-CREDIT>                    0.12068    0.01456     0.01456     -0.12068     -0.3656144D-01           -0.10207
CECRT03     CE TECH HRS FOR CREDIT                   0.12339    0.01522     0.00066     -0.09159     -0.2182294D-01           -0.03174
(CONSTANT)                                                                                             6.621819

VARIABLE                                 OSP06    MULTIPLE R   R SQUARE   RSQ CHANGE    SIMPLE R              B                 BETA

CECRX06     TECH. CE <NON-CREDIT>                    0.17098    0.02923     0.02923     -0.17098     -0.2199149D-01           -0.15066
CECRT06     CE TECH HRS FOR CREDIT                   0.17720    0.03140     0.00217     -0.11104     -0.3612926D-01           -0.05080
(CONSTANT)                                                                                             8.165704

VARIABLE                                 OSP09    MULTIPLE R   R SQUARE   RSQ CHANGE    SIMPLE R              B                 BETA

CECRT09     CE TECH HRS FOR CREDIT                   0.06813    0.00464     0.00464     -0.06813     -0.1586281               -0.05355
CECRX09     TECH. CE <NON-CREDIT>                    0.08082    0.00653     0.00189     -0.06288     -0.1291713D-01           -0.04587
(CONSTANT)                                                                                            14.50019

VARIABLE                                 OSP12    MULTIPLE R   R SQUARE   RSQ CHANGE    SIMPLE R              B                 BETA

CECRT12     CE TECH HRS FOR CREDIT                   0.06405    0.00410     0.00410     -0.06405     -0.1981544               -0.06162
CECRX12     TECH. CE <NON-CREDIT>                    0.06555    0.00430     0.00019     -0.02475     -0.4014221D-02           -0.01412
(CONSTANT)                                                                                            18.92759

VARIABLE                                 OSP15    MULTIPLE R   R SQUARE   RSQ CHANGE    SIMPLE R              B                 BETA

CECRX15     TECH. CE <NON-CREDIT>                    0.06766    0.00458     0.00458     -0.06766     -0.3564726D-01           -0.06858
CECRT15     CE TECH HRS FOR CREDIT                   0.06820    0.00465     0.00007      0.00126      0.8469726D-01            0.00860
(CONSTANT)                                                                                            29.83764

VARIABLE                                 OSP18    MULTIPLE R   R SQUARE   RSQ CHANGE    SIMPLE R              B                 BETA

CECRX18     TECH. CE <NON-CREDIT>                    0.06297    0.00397     0.00397     -0.06297     -0.1004162D-01           -0.06297
(CONSTANT)                                                                                            19.93502
```

MULTIPLE REGRESSION - ALL COMBINED
VS. OSP (CETECH HOURS NON-CREDIT VS. CREDIT)

```
VARIABLE                                        MULTIPLE R  R SQUARE  RSQ CHANGE  SIMPLE R        B           BETA

CECRT03    CE TECH HRS FOR CREDIT               0.17837     0.03182   0.03182     -0.17837   -37.40921     -0.19495
CECRX03    TECH. CE <NON-CREDIT>                0.17953     0.03223   0.00041     -0.09686    2.930493      0.02625
(CONSTANT)                                                                                  16576.07


VARIABLE                                        MULTIPLE R  R SQUARE  RSQ CHANGE  SIMPLE R        B           BETA

CECRT06    CE TECH HRS FOR CREDIT               0.09775     0.00956   0.00956     -0.09775   -17.83487     -0.09775
(CONSTANT)                                                                                  17204.64


VARIABLE                                        MULTIPLE R  R SQUARE  RSQ CHANGE  SIMPLE R        B           BETA

CECRX09    TECH. CE <NON-CREDIT>                0.24228     0.05870   0.05870      0.24228    6.657008      0.21179
CECRT09    CE TECH HRS FOR CREDIT               0.26155     0.06841   0.00971      0.16576    33.57433      0.10313
(CONSTANT)                                                                                  17149.60


VARIABLE                                        MULTIPLE R  R SQUARE  RSQ CHANGE  SIMPLE R        B           BETA

CECRX12    TECH. CE <NON-CREDIT>                0.46719     0.21827   0.21827      0.46719    16.23906      0.48008
CECRT12    CE TECH HRS FOR CREDIT               0.47815     0.22863   0.01036     -0.04229   -31.58935     -0.10258
(CONSTANT)                                                                                  19029.95


VARIABLE                                        MULTIPLE R  R SQUARE  RSQ CHANGE  SIMPLE R        B           BETA

CECRX15    TECH. CE <NON-CREDIT>                0.32920     0.10837   0.10837      0.32920    16.80334      0.33519
CECRT15    CE TECH HRS FOR CREDIT               0.33155     0.10992   0.00155      0.01063   -21.50422     -0.03982
(CONSTANT)                                                                                  22464.71


VARIABLE                                        MULTIPLE R  R SQUARE  RSQ CHANGE  SIMPLE R        B           BETA

CECRX18    TECH. CE <NON-CREDIT>                0.34662     0.12015   0.12015      0.34662    21.41066      0.35560
CECRT18    CE TECH HRS FOR CREDIT               0.37057     0.13733   0.01718     -0.10707   -101.7411     -0.13138
(CONSTANT)                                                                                  26307.16
```

MULTIPLE REGRESSION - ALL COMBINED
VS. OAC (CETECH HOURS NON-CREDIT VS. CREDIT)

APPENDIX 2D A

SYLVANIA

```
CODE                         VALID CASES       80
     I
 2.0 ** (       1)
     I
     I
     I
 3.0 **** (       6)
     I
     I
     I
 4.0 ************************ (        50)
     I
     I
     I
 5.0 ************ (       23)
     -
```

FMC

```
CODE                          VALID CASES       92
     I
 2.0 ** (       1)
     I
     I
     I
 3.0 **** (       5)
     I
     I
     I
 4.0 ************************** (        53)
     I
     I
     I
 5.0 ***************** (       33)
     -
```

NASA

```
CODE                                     VALID CASES       85
     I
 2.0 ** (       1)
     I
     I
     I
 3.0 ********* (       8)
     I
     I
     I
 4.0 ******************************* (       32)
     I
     I
     I
 5.0 ******************************************* (       44)
     -
```

FORD

```
CODE                              VALID CASES      118
     I
 2.0 *** (      3)
     I
     I
     I
 3.0 ******* (      11)
     I
     I
     I
 4.0 ********************************* (       67)
     I
     I
     I
 5.0 ******************* (       37)
     -
```

ATTITUDE ABOUT JOB PERFORMANCE (OAJP)
Frequency Distributions

ALL COMBINED

```
CODE                      VALID CASES      375
     I
 2.0 ** (       6)
     I
     I
     I
 3.0 **** (     30)
     I
     I
     I
 4.0 ******************* (     202)
     I
     I
     I
 5.0 ************** (    137)
     -
```

Large Negative Effect	Small Negative Effect	No Effect	Small Positive Effect	Large Positive Effect
1	2	3	4	5

SYLVANIA

```
CODE                 VALID CASES      80
     I
 3.0 *************** (     27)
     I
     I
     I
 4.0 ********************* (     38)
     I
     I
     I
 5.0 ********** (     15)
     -
```

FMC

```
CODE                              VALID CASES      92
     I
 2.0 ** (     1)
     I
     I
     I
 3.0 ********************************** (     30)
     I
     I
     I
 4.0 ********************************************** (     42)
     I
     I
     I
 5.0 *********************** (     19)
     -
```

NASA

```
CODE                             VALID CASES      85
     I
 2.0 ** (     1)
     I
     I
     I
 3.0 *************** (     12)
     I
     I
     I
 4.0 ******************************************* (     40)
     I
     I
     I
 5.0 *********************************** (     32)
     -
```

FORD

```
CODE                        VALID CASES      117
     I
 2.0 ** (     1)
     I
     I
     I
 3.0 ******************** (     36)
     I
     I
     I
 4.0 ******************************** (     57)
     I
     I
     I
 5.0 ************** (     23)
     -
```

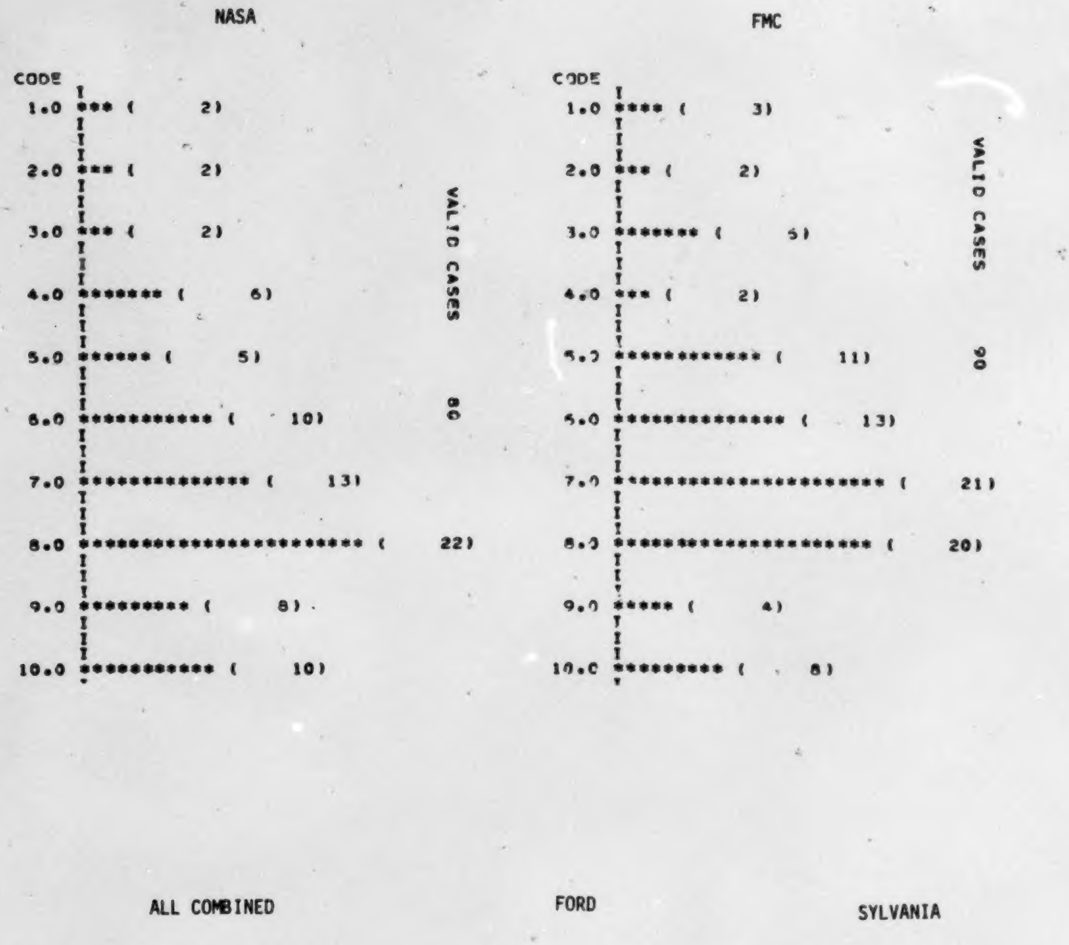
ALL COMBINED

```
CODE                            VALID CASES      374
     I
 2.0 ** (     3)
     I
     I
     I
 3.0  **************************** (    105)
     I
     I
     I
 4.0 *********************************************** (    177)
     I
     I
     I
 5.0 ************************ (     89)
     -
```

Large Negative Effect	Small Negative Effect	No Effect	Small Positive Effect	Large Positive Effect
1	2	3	4	5

APPENDIX 20 B

ATTITUDE ABOUT JOB ASSIGNMENT (OAJA)
Frequency Distributions



JOB RELATED VALUE OF CE (CEAJR)
Frequency Distributions

10 being the most valuable

APPENDIX 20C

ALL COMBINED

```
CODE
     I
 1.0 **** (      10)
     I
 2.0 ***** (      15)
     I
 3.0 ****** (      20)
     I
 4.0 ****** (      19)
     I
 5.0 *********** (      41)
     I
 6.0 ********* (      33)
     I
 7.0 ***************** (      61)
     I
 8.0 ********************* (      76)
     I
 9.0 ************** (      50)
     I
10.0 *********** (      40)

VALID CASES     365
```

FORD

```
CODE
     I
 1.0 *** (      4)
     I
 2.0 *** (      4)
     I
 3.0 ****** (      10)
     I
 4.0 *** (      4)
     I
 5.0 ********** (      16)
     I
 6.0 ****** (      10)
     I
 7.0 ************* (      22)
     I
 8.0 ************* (      21)
     I
 9.0 *********** (      17)
     I
10.0 ***** (      8)

VALID CASES     116
```

SYLVANIA

```
CODE
     I
 1.0 ** (      2)
     I
 2.0 **** (      5)
     I
 3.0 *** (      4)
     I
 4.0 **** (      6)
     I
 5.0 ***** (      8)
     I
 6.0 ***** (      8)
     I
 7.0 **** (      6)
     I
 8.0 ********* (      15)
     I
 9.0 ******** (      14)
     I
10.0 ******* (      11)

VALID CASES     79
```

FMC

```
CODE
     I
 1.0 ***** (      4)
     I
 2.0 ***** (      4)
     I
 3.0 ****** (      5)
     I
 4.0 ***** (      4)
     I
 5.0 ************ (      10)
     I
 6.0 ********* (      8)
     I
 7.0 ****************** (      16)
     I
 8.0 ****************************** (      28)
     I
 9.0 ******* (      6)
     I
10.0 ****** (      5)

VALID CASES     90
```

NASA

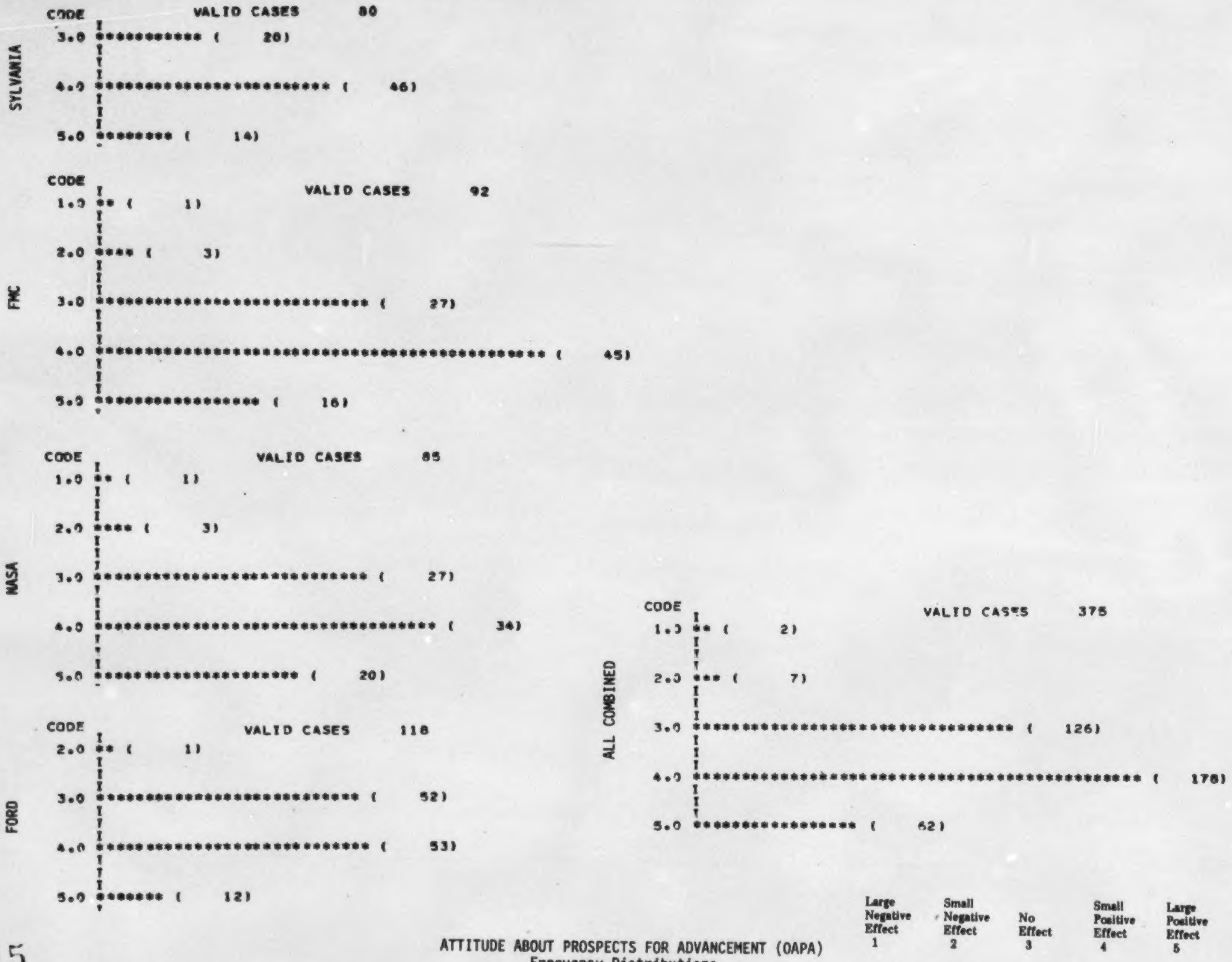
```
CODE
     I
 2.0 ****** (      2)
     I
 3.0 **** (      1)
     I
 4.0 ************** (      5)
     I
 5.0 ******************** (      7)
     I
 6.0 ******************** (      7)
     I
 7.0 ************************************************ (      17)
     I
 8.0 ********************************** (      12)
     I
 9.0 ************************************* (      13)
     I
10.0 ********************************************* (      16)

VALID CASES     80
```

STIMULATION VALUE OF CE (CEAIS)
Frequency Distributions

10 being the *most* valuable

APPENDIX 20 E



ATTITUDE ABOUT PROSPECTS FOR ADVANCEMENT (OAPA)
Frequency Distributions

SYLVANIA

```
CODE                VALID CASES        80
     I
 2.0 *** (       3)
     I
     I
     I
 3.0 ****** (      10)
     I
     I
     I
 4.0 ******************** (      35)
     I
     I
     I
 5.0 ****************** (      32)
     .
```

FMC

```
CODE                                VALID CASES        92
     I
 2.0 ** (       1)
     I
     I
     I
 3.0 ********************** (      20)
     I
     I
     I
 4.0 *********************************************** (      44)
     I
     I
     I
 5.0 ***************************** (      27)
     .
```

NASA

```
CODE                             VALID CASES        85
     I
 2.0 **** (       3)
     I
     I
     I
 3.0 ************* (      11)
     I
     I
     I
 4.0 ************************************** (      35)
     I
     I
     I
 5.0 *************************************** (      36)
     .
```

FORD

```
CODE                   VALID CASES      117
     I
 2.0 ** (       2)
     I
     I
     I
 3.0 ************** (      23)
     I
     I
     I
 4.0 ****************************** (      55)
     I
     I
     I
 5.0 ********************* (      37)
     .
```

ALL COMBINED

```
CODE                            VALID CASES      374
     I
 2.0 *** (       9)
     I
     I
     I
 3.0 ****************** (      64)
     I
     I
     I
 4.0 ********************************************* (     169)
     I
     I
     I
 5.0 *********************************** (     132)
     .
```

Large Negative Effect	Small Negative Effect	No Effect	Small Positive Effect	Large Positive Effect
1	2	3	4	5

APPENDIX 20 F

ATTITUDE ABOUT FEELINGS ABOUT SELF (OAFY)
Frequency Distributions

APPENDIX 20 G

SYLVANIA

```
CODE           VALID CASES      80
     I
 3.0 ****** (      9)
     I
     I
     I
 4.0 ********************** (     37)
     I
     I
     I
 5.0 ******************** (     34)
     .
```

FMC

```
CODE                     VALID CASES      91
     I
 2.0 ** (      1)
     I
     I
     I
 3.0 ******** (     11)
     I
     I
     I
 4.0 ********************************* (     58)
     I
     I
     I
 5.0 ************* (     21)
     .
```

NASA

```
CODE                              VALID CASES      85
     I
 1.0 ** (      1)
     I
     I
     I
 2.0 *** (      2)
     I
     I
     I
 3.0 ******** (      5)
     I
     I
     I
 4.0 ****************************************** (     37)
     I
     I
     I
 5.0 ******************************************** (     39)
```

FORD

```
CODE                   VALID CASES      117
     I
 3.0 **************** (     25)
     I
     I
     I
 4.0 ******************************** (     56)
     I
     I
     I
 5.0 ********************** (     36)
     -
```

ALL COMBINED

```
CODE                              VALID CASES      373
     I
 1.0 * (      1)
     I
     I
     I
 2.0 ** (      3)
     I
     I
     I
 3.0 **************** (     51)
     I
     I
     I
 4.0 ***************************************************** (    188)
     I
     I
     I
 5.0 ************************************** (    130)
```

Large Negative Effect	Small Negative Effect	No Effect	Small Positive Effect	Large Positive Effect
1	2	3	4	5

ATTITUDE ABOUT INTELLECTUAL PERSPECTIVE (OAIP)
Frequency Distributions

APPENDIX 2D H

SYLVANIA

```
CODE                    VALID CASES       80
     I
 3.0 *****************  (     32)
     I
     I
     I
 4.0 ********************  (     37)
     I
     I
     I
 5.0 *******  (     11)
     I
```

FMC

```
CODE                                         VALID CASES       92
     I
 2.0 ***  (      2)
     I
     I
     I
 3.0 *******************************  (     30)
     I
     I
     I
 4.0 *********************************************  (     44)
     I
     I
     I
 5.0 *****************  (     16)
     I
```

NASA

```
CODE                                       VALID CASES       84
     I
 2.0 **  (      1)
     I
     I
     I
 3.0 **************************  (     25)
     I
     I
     I
 4.0 **********************************************  (     45)
     I
     I
     I
 5.0 **************  (     13)
     I
```

FORD

```
CODE                        VALID CASES      118
     I
 2.0 **  (      1)
     I
     I
     I
 3.0 **************************  (     50)
     I
     I
     I
 4.0 ***************************  (     52)
     I
     I
     I
 5.0 *********  (     15)
     I
```

ALL COMBINED

```
CODE                             VALID CASES      374
     I
 2.0 **  (      4)
     I
     I
     I
 3.0 ***********************************  (    137)
     I
     I
     I
 4.0 **********************************************  (    178)
     I
     I
     I
 5.0 ***************  (     55)
     I
```

Large Negative Effect	Small Negative Effect	No Effect	Small Positive Effect	Large Positive Effect
1	2	3	4	5

ATTITUDE ABOUT FELLOW WORKERS (OAFW)
Frequency Distributions

APPENDIX 20 I

FMC

```
CODE                       VALID CASES      92
     I
 1.0 *** (       2)
     I
     I
     I
 2.0 ********* (       7)
     I
     I
     I
 3.0 *********************************** (      33)
     I
     I
     I
 4.0 ******************************************** (      41)
     I
     I
     I
 5.0 *********** (       9)
     -
```

NASA

```
CODE                       VALID CASES      85
     I
 1.0 *** (       2)
     I
     I
     I
 2.0 ***** (       4)
     I
     I
     I
 3.0 ***************************** (      27)
     I
     I
     I
 4.0 ***************************** (      27)
     I
     I
     I
 5.0 *************************** (      25)
     -
```

FORD

```
CODE                       VALID CASES     118
     I
 1.0 ***** (       8)
     I
     I
     I
 2.0 ********* (      13)
     I
     I
     I
 3.0 ******************************** (      60)
     I
     I
     I
 4.0 ***************** (      29)
     I
     I
     I
 5.0 ***** (       8)
     -
```

SYLVANIA

```
                  VALID CASES       80
CODE
     I
 1.0 ** (       2)
     I
     I
     I
 2.0 **** (       5)
     I
     I
     I
 3.0 ************* (      21)
     I
     I
     I
 4.0 ******************* (      33)
     I
     I
     I
 5.0 ************ (      19)
     -
```

ALL COMBINED

```
CODE                       VALID CASES     375
     I
 1.0 ***** (      14)
     I
     I
     I
 2.0 ********* (      29)
     I
     I
     I
 3.0 ************************************** (     141)
     I
     I
     I
 4.0 *********************************** (     130)
     I
     I
     I
 5.0 ***************** (      61)
```

Large Negative Effect	Small Negative Effect	No Effect	Small Positive Effect	Large Positive Effect
1	2	3	4	5

ATTITUDE ABOUT EMPLOYER (OAFE)
Frequency Distributions

```
                                       ADJ CUM                       ADJ CUM                        ADJ CUM
                          CODE    FREQ PCT PCT      CODE       FREQ PCT PCT      CODE        FREQ PCT PCT
      ALL COMBINED
                           0.0      22   6   6      40.0          4   1  16      70.0          12   3  50
                          10.0       3   1   7      50.0         83  23  39      75.0          68  19  69
                          20.0       5   1   8      55.0          1   0  40      80.0          28   8  77
VALID CASES      369      25.0      18   4  13      60.0         23   6  46      85.0           4   1  78
                          30.0       5   1  14      65.0          1   0  46      90.0           8   2  81
                          33.0       3   1  15      66.0          2   1  47     100.0          69  19 100
                          35.0       1   0  15      67.0          1   0  47     115.0           1   0 100


                                       ADJ CUM                       ADJ CUM                        ADJ CUM
                          CODE    FREQ PCT PCT      CODE       FREQ PCT PCT      CODE        FREQ PCT PCT
        SYLVANIA
                           0.0       3   4   4      40.0          2   3  19      75.0          16  22  76
                          10.0       1   1   5      50.0         18  24  43      80.0           9  12  88
VALID CASES       74      20.0       2   3   8      60.0          4   5  49      85.0           1   1  89
                          25.0       5   7  15      66.0          1   1  50     100.0           8  11 100
                          30.0       1   1  16      70.0          3   4  54


                                       ADJ CUM                       ADJ CUM                        ADJ CUM
                          CODE    FREQ PCT PCT      CODE       FREQ PCT PCT      CODE        FREQ PCT PCT
           FMC
                           0.0       4   5   5      40.0          2   2  13      75.0          18  21  65
VALID CASES       86      10.0       1   1   6      50.0         23  27  40      80.0           5   6  71
                          25.0       1   1   7      60.0          2   2  42      85.0           1   1  72
                          30.0       2   2   9      66.0          1   1  43      90.0           2   2  74
                          33.0       1   1  10      70.0          1   1  44     100.0          22  26 100


                                       ADJ CUM                       ADJ CUM                        ADJ CUM
                          CODE    FREQ PCT PCT      CODE       FREQ PCT PCT      CODE        FREQ PCT PCT
          NASA
                           0.0       3   4   4      60.0          8  10  35      85.0           1   1  78
                          20.0       2   2   6      65.0          1   1  37      90.0           5   6  84
VALID CASES       82      33.0       1   1   7      70.0          5   6  43     100.0          12  15  99
                          50.0      14  17  24      75.0         20  24  67     115.0           1   1 100
                          55.0       1   1  26      80.0          8  10  77


                                       ADJ CUM                       ADJ CUM                        ADJ CUM
                          CODE    FREQ PCT PCT      CODE       FREQ PCT PCT      CODE        FREQ PCT PCT
          FORD
                           0.0      12  10  10      35.0          1   1  23      80.0           6   5  75
VALID CASES    117        10.0       1   1  11      50.0         28  24  47      85.0           1   1  76
                          20.0       1   1  12      60.0          9   8  55      90.0           1   1  77
                          25.0       9   8  20      67.0          1   1  56     100.0          27  23 100
                          30.0       2   2  21      70.0          3   3  58
                          33.0       1   1  22      75.0         14  12  70
```

APPENDIX 20 J

POLICY POSITION RELATIVE TO CE (POLICY)
Frequency Distributions

APPENDIX 21A

		OAC03	OAC06	OAC09	OAC12	OAC15	OAC18	ORC03	ORC06	ORC09	ORC12	ORC15	ORC18
	CETCH	-0.3233 (33) S=0.033	-0.0697 (45) S=0.325	0.1629 (51) S=0.127	0.1882 (50) S=0.095	0.0647 (51) S=0.326	-0.1702 (36) S=0.161	0.0588 (33) S=0.292	0.0590 (45) S=0.350	0.2319 (51) S=0.051	0.0977 (50) S=0.250	-0.1008 (51) S=0.241	-0.1198 (36) S=0.243
	CEBUS	0.0747 (33) S=0.344	0.2376 (45) S=0.058	0.3269 (51) S=0.010	0.1210 (50) S=0.201	0.1900 (51) S=0.091	0.0010 (36) S=0.498	0.1474 (33) S=0.206	0.0382 (45) S=0.402	-0.0142 (51) S=0.461	-0.1616 (50) S=0.131	-0.0692 (51) S=0.315	-0.1107 (36) S=0.260
Not Counting 0 CETECH Hrs	CETCH	-0.4026 (21) S=0.035	0.0129 (37) S=0.470	0.1287 (38) S=0.221	0.2393 (42) S=0.063	0.1015 (40) S=0.267	-0.0960 (29) S=0.310	0.3677 (21) S=0.385	0.0238 (37) S=0.444	0.2454 (38) S=0.068	0.1617 (42) S=0.153	0.1290 (40) S=0.214	-0.1393 (29) S=0.236
	CEBUS	0.5570 (21) S=0.001	0.2779 (37) S=0.048	0.4888 (38) S=0.001	0.1624 (42) S=0.152	0.2195 (40) S=0.087	0.1984 (29) S=0.164	-0.0501 (21) S=0.415	0.0822 (37) S=0.314	-0.0761 (38) S=0.325	-0.1727 (42) S=0.137	-0.0129 (40) S=0.469	-0.1367 (29) S=0.240
Not Counting Less Than 100 CETECH Hrs	CETCH	-0.2810 (5) S=0.323	-0.2515 (13) S=0.204	0.2487 (18) S=0.160	0.5427 (20) S=0.007	0.4348 (17) S=0.041	0.2093 (11) S=0.268	0.3968 (5) S=0.254	0.4047 (13) S=0.085	0.3299 (18) S=0.091	0.0444 (20) S=0.426	0.2491 (17) S=0.168	-0.7952 (11) S=0.002
	CEBUS	99.0000 (5) S=******	0.0081 (13) S=0.489	0.6308 (18) S=0.003	0.2861 (20) S=0.111	0.5657 (17) S=0.009	0.3200 (11) S=0.169	99.0000 (5) S=******	0.1646 (13) S=0.295	-0.0672 (18) S=0.396	-0.1264 (20) S=0.298	0.1961 (17) S=0.225	0.3504 (11) S=0.145
Not Counting Less Than 200 CETECH Hrs	CETCH	99.0000 (1) S=******	0.3923 (7) S=0.192	0.2625 (12) S=0.205	0.5127 (15) S=0.025	0.4027 (12) S=0.097	-0.3063 (7) S=0.252	99.0000 (0) S=******	0.9937 (3) S=0.036	0.4820 (8) S=0.113	0.1798 (10) S=0.310	-0.0526 (7) S=0.455	-0.7285 (6) S=0.050
	CEBUS	99.0000 (1) S=******	99.0000 (7) S=******	0.6031 (12) S=0.019	0.4199 (15) S=0.060	0.5922 (12) S=0.021	0.1113 (7) S=0.406	99.0000 (0) S=******	99.0000 (3) S=******	-0.3594 (8) S=0.191	-0.2486 (10) S=0.244	0.1468 (7) S=0.377	0.7746 (6) S=0.035
Not Counting Less Than 300 CETECH Hrs	CETCH	99.0000 (0) S=******	-0.3073 (3) S=0.401	0.0188 (8) S=0.482	0.3359 (10) S=0.171	0.4641 (7) S=0.147	-0.1504 (6) S=0.388	99.0000 (1) S=******	0.8078 (7) S=0.014	0.5476 (12) S=0.033	0.0938 (15) S=0.370	-0.0810 (12) S=0.401	-0.8192 (7) S=0.012
	CEBUS	99.0000 (0) S=******	99.0000 (3) S=******	0.5874 (8) S=0.063	0.3309 (10) S=0.175	0.7167 (7) S=0.035	0.2331 (6) S=0.328	99.0000 (1) S=******	99.0000 (7) S=******	-0.2045 (12) S=0.262	-0.1834 (15) S=0.256	0.0067 (12) S=0.492	0.4308 (7) S=0.167

CETECH & CEBUS vs. OAC & ORC
Ford - Total Group - Eliminating Different Levels of CETECH

APPENDIX 21B

		OSP03	OSP06	OSP09	OSP12	OSP15	OSP18	OCR	OCR	OCR	OCR	OCR	OCR
	CETCH	-0.1265 (57) S=0.174	-0.2016 (70) S=0.047	-0.1947 (67) S=0.057	-0.1320 (69) S=0.140	-0.0587 (66) S=0.215	-0.1074 (48) S=0.234	0.0002 (81) S=0.499	0.0579 (81) S=0.304	0.0468 (81) S=0.339	0.0627 (81) S=0.289	0.0785 (81) S=0.243	0.0667 (81) S=0.277
	CEBUS	-0.0667 (57) S=0.311	-0.0711 (70) S=0.279	0.0964 (67) S=0.219	0.0016 (69) S=0.495	-0.0773 (66) S=0.269	0.1499 (48) S=0.155	0.1454 (81) S=0.098	0.1396 (81) S=0.107	0.1422 (81) S=0.103	0.1670 (81) S=0.068	0.0934 (81) S=0.203	0.1322 (81) S=0.120
Not Counting 0 CETECH Hrs	CETCH	-0.1105 (32) S=0.274	-0.1570 (45) S=0.152	-0.1921 (48) S=0.095	-0.1645 (53) S=0.120	-0.1334 (49) S=0.180	-0.1205 (35) S=0.245	0.2565 (20) S=0.137	0.1174 (30) S=0.268	0.0582 (35) S=0.370	0.0217 (43) S=0.445	0.0580 (48) S=0.348	0.0535 (50) S=0.356
	CEBUS	0.0430 (32) S=0.408	-0.0508 (45) S=0.370	0.2506 (48) S=0.043	-0.0147 (53) S=0.458	-0.1095 (49) S=0.227	-0.0456 (35) S=0.399	0.0211 (20) S=0.465	-0.3044 (30) S=0.051	-0.0169 (35) S=0.462	0.0499 (43) S=0.375	-0.0905 (48) S=0.270	0.0653 (50) S=0.326
Not Counting Less Than 100 CETECH Hrs	CETCH	0.4351 (11) S=0.091	-0.2177 (17) S=0.201	-0.1988 (20) S=0.200	-0.1535 (22) S=0.248	-0.1191 (19) S=0.314	0.1046 (14) S=0.361	0.4525 (8) S=0.130	0.3592 (13) S=0.114	0.2349 (16) S=0.191	0.0233 (20) S=0.461	0.0510 (22) S=0.411	-0.0268 (23) S=0.452
	CEBUS	99.0000 (11) S=*****	0.5532 (17) S=0.011	0.0797 (20) S=0.369	-0.0132 (22) S=0.477	-0.1489 (19) S=0.271	0.5866 (14) S=0.014	99.0000 (8) S=*****	-0.3714 (13) S=0.106	-0.1798 (16) S=0.253	0.0453 (20) S=0.425	-0.2308 (22) S=0.151	-0.1718 (23) S=0.217
Not Counting Less Than 200 CETECH Hrs	CETCH	0.9025 (6) S=0.007	0.3796 (9) S=0.157	-0.0463 (15) S=0.435	0.2480 (13) S=0.207	-0.1374 (13) S=0.327	-0.1259 (8) S=0.383	-0.6256 (5) S=0.130	0.6509 (8) S=0.040	0.2326 (13) S=0.222	0.2453 (14) S=0.199	0.2012 (17) S=0.219	0.1305 (18) S=0.303
	CEBUS	99.0000 (6) S=*****	99.0000 (9) S=*****	-0.1359 (15) S=0.315	-0.4052 (13) S=0.085	-0.1192 (13) S=0.349	0.6733 (8) S=0.034	99.0000 (5) S=*****	-0.4831 (8) S=0.113	-0.2413 (13) S=0.214	0.0509 (14) S=0.431	-0.2083 (17) S=0.211	-0.1359 (18) S=0.295
Not Counting Less Than 300 CETECH Hrs	CETCH	-0.1890 (3) S=0.439	0.0453 (5) S=0.471	-0.1906 (10) S=0.299	0.1773 (9) S=0.324	-0.4472 (8) S=0.133	-0.5259 (6) S=0.142	99.0000 (1) S=*****	0.6695 (4) S=0.165	0.5219 (7) S=0.115	0.6011 (10) S=0.033	0.5269 (11) S=0.048	0.4859 (12) S=0.055
	CEBUS	99.0000 (3) S=*****	99.0000 (5) S=*****	-0.1707 (10) S=0.319	-0.5130 (9) S=0.079	-0.1902 (8) S=0.326	0.7775 (6) S=0.034	99.0000 (1) S=*****	-0.9988 (4) S=0.001	-0.2926 (7) S=0.262	0.1689 (10) S=0.320	-0.2099 (11) S=0.268	-0.1170 (12) S=0.359

CETECH & CEBUS vs. OSP & OCR
Ford - Total Group - Eliminating Different Levels of CETECH

		OAC03	OAC06	OAC09	OAC12	OAC15	OAC18	ORC03	ORC06	ORC09	ORC12	ORC15	ORC18
	CETCH	-0.2730 (23) S=0.104	0.0222 (36) S=0.449	0.5417 (40) S=0.001	0.6701 (48) S=0.001	0.6266 (45) S=0.001	0.6153 (35) S=0.001	0.0408 (23) S=0.427	0.3593 (36) S=0.008	0.4419 (40) S=0.002	0.5105 (48) S=0.001	0.3799 (45) S=0.005	0.4355 (35) S=0.004
	CEBUS	0.4701 (23) S=0.012	-0.0802 (36) S=0.321	0.1073 (40) S=0.255	0.4289 (48) S=0.001	0.3239 (45) S=0.015	0.2000 (35) S=0.125	-0.0533 (23) S=0.336	0.2407 (36) S=0.079	0.0543 (40) S=0.370	0.2314 (48) S=0.057	0.0663 (45) S=0.333	0.2133 (35) S=0.109
Not Counting 0 CETECH Hrs	CETCH	-0.3546 (18) S=0.059	-0.1794 (29) S=0.175	0.5160 (34) S=0.001	0.6464 (41) S=0.001	0.4853 (34) S=0.002	0.4543 (24) S=0.013	0.1108 (18) S=0.331	0.2624 (29) S=0.085	0.3518 (34) S=0.021	0.4571 (41) S=0.001	0.3434 (34) S=0.023	0.4677 (24) S=0.011
	CEBUS	0.5089 (18) S=0.016	-0.1061 (29) S=0.292	0.0654 (34) S=0.357	0.4052 (41) S=0.004	0.2593 (34) S=0.069	0.2589 (24) S=0.111	-0.1623 (18) S=0.261	0.3434 (29) S=0.034	-0.0108 (34) S=0.476	0.1955 (41) S=0.110	0.0009 (34) S=0.498	0.1907 (24) S=0.186
Not Counting Less Than 100 CETECH Hrs	CETCH	-0.1967 (8) S=0.320	0.0099 (22) S=0.482	0.3628 (25) S=0.037	0.6377 (32) S=0.001	0.5800 (22) S=0.002	0.3974 (17) S=0.057	-0.4906 (6) S=0.109	0.0324 (22) S=0.443	0.4411 (25) S=0.014	0.5827 (32) S=0.001	0.3298 (22) S=0.067	0.5523 (17) S=0.011
	CEBUS	99.0000 (8) S=*****	-0.2307 (22) S=0.151	0.0225 (25) S=0.457	0.3747 (32) S=0.017	0.3573 (22) S=0.051	0.2283 (17) S=0.189	99.0000 (8) S=*****	0.3768 (22) S=0.042	0.1537 (25) S=0.232	0.2109 (32) S=0.123	-0.0240 (22) S=0.458	0.1801 (17) S=0.245
Not Counting Less Than 200 CETECH Hrs	CETCH	-0.4905 (6) S=0.162	0.1073 (18) S=0.336	0.2818 (23) S=0.096	0.5414 (26) S=0.002	0.6106 (19) S=0.003	0.5266 (12) S=0.039	-0.0618 (6) S=0.454	0.0671 (18) S=0.396	0.3790 (23) S=0.037	0.4772 (26) S=0.007	0.4096 (19) S=0.041	0.6088 (12) S=0.018
	CEBUS	99.0000 (6) S=*****	-0.3191 (18) S=0.098	-0.0127 (23) S=0.477	0.3243 (26) S=0.053	0.3434 (19) S=0.075	0.4989 (12) S=0.049	99.0000 (6) S=*****	-0.1417 (18) S=0.288	0.1281 (23) S=0.280	0.1567 (26) S=0.222	-0.0184 (19) S=0.470	0.3800 (12) S=0.112
Not Counting Less Than 300 CETECH Hrs	CETCH	-0.0504 (4) S=0.475	-0.1578 (15) S=0.287	0.1063 (19) S=0.333	0.5183 (23) S=0.006	0.5870 (17) S=0.007	0.6258 (11) S=0.020	-0.9788 (4) S=0.011	-0.1139 (15) S=0.343	0.0807 (19) S=0.371	0.4542 (23) S=0.015	0.4186 (17) S=0.047	0.7815 (11) S=0.002
	CEBUS	99.0000 (4) S=*****	-0.4371 (15) S=0.052	-0.0960 (19) S=0.348	0.2634 (23) S=0.095	0.3023 (17) S=0.119	0.4883 (11) S=0.064	99.0000 (4) S=*****	-0.2115 (15) S=0.225	0.0162 (19) S=0.474	0.1430 (23) S=0.258	-0.0736 (17) S=0.389	0.3528 (11) S=0.144

APPENDIX 21C

CETECH & CEBUS vs. OAC & ORC
NASA - Total Group - Eliminating Different Levels of CETECH

APPENDIX 21D

		OSP03	OSP06	OSP09	OSP12	OSP15	OSP18
	CETCH	-0.2347 (42) S=0.067	-0.2115 (47) S=0.077	-0.0890 (45) S=0.280	0.0361 (52) S=0.400	-0.0629 (46) S=0.339	-0.1346 (37) S=0.214
	CEBUS	-0.0542 (42) S=0.367	0.4374 (47) S=0.001	-0.0735 (45) S=0.316	0.0209 (52) S=0.442	-0.0281 (46) S=0.427	0.1784 (37) S=0.145
Not Counting 0 CETECH Hrs	CETCH	-0.0157 (28) S=0.469	-0.1328 (34) S=0.227	-0.1383 (38) S=0.204	0.0160 (45) S=0.458	-0.0963 (37) S=0.285	-0.1700 (27) S=0.198
	CEBUS	0.1709 (28) S=0.192	-0.0369 (34) S=0.418	-0.0815 (38) S=0.313	0.0145 (46) S=0.462	-0.0373 (37) S=0.413	0.3384 (27) S=0.042
Not Counting Less Than 100 CETECH Hrs	CETCH	0.0054 (18) S=0.492	-0.0196 (27) S=0.461	-0.2125 (28) S=0.139	-0.0689 (32) S=0.354	-0.2495 (23) S=0.125	-0.2046 (18) S=0.208
	CEBUS	0.0545 (18) S=0.415	0.0178 (27) S=0.465	-0.0780 (28) S=0.347	-0.0180 (32) S=0.461	-0.0846 (23) S=0.351	0.2537 (18) S=0.155
Not Counting Less Than 200 CETECH Hrs	CETCH	0.1109 (12) S=0.366	-0.1236 (23) S=0.287	-0.2529 (26) S=0.106	-0.1258 (27) S=0.266	-0.3081 (20) S=0.093	0.4144 (13) S=0.080
	CEBUS	99.0000 (12) S=*****	0.2623 (23) S=0.113	-0.0836 (26) S=0.342	-0.0329 (27) S=0.435	-0.0962 (20) S=0.343	0.6705 (13) S=0.006
Not Counting Less Than 300 CETECH Hrs	CETCH	-0.2851 (8) S=0.247	-0.1332 (20) S=0.288	0.1126 (22) S=0.309	0.4243 (24) S=0.019	-0.3498 (17) S=0.084	0.5032 (11) S=0.057
	CEBUS	99.0000 (6) S=*****	0.2783 (20) S=0.117	-0.1672 (22) S=0.229	0.3057 (24) S=0.073	0.7180 (17) S=0.001	0.8345 (11) S=0.001

CETECH & CEBUS vs. OSP

NASA - Total Group - Eliminating Different Levels of CETECH

		OAC03	OAC06	OAC09	OAC12	OAC15	OAC18	ORC03	ORC06	ORC09	ORC12	ORC15	ORC18
	CETCH	0.3846 (21) S=0.043	0.0865 (23) S=0.347	0.3136 (26) S=0.059	0.4101 (28) S=0.015	0.3415 (31) S=0.030	-0.0122 (35) S=0.472	0.1482 (21) S=0.261	-0.2320 (23) S=0.143	-0.0479 (26) S=0.408	0.4204 (28) S=0.013	0.1513 (31) S=0.208	0.1871 (35) S=0.141
	CEBUS	0.1724 (21) S=0.227	0.3218 (23) S=0.067	0.4146 (26) S=0.018	0.2199 (28) S=0.130	0.5238 (31) S=0.001	0.6731 (35) S=0.001	-0.1914 (21) S=0.203	0.1041 (23) S=0.318	0.0719 (26) S=0.364	0.1825 (28) S=0.176	0.2539 (31) S=0.084	0.0318 (35) S=0.428
Not Counting 0 CETECH Hrs	CETCH	0.3372 (17) S=0.093	-0.0536 (13) S=0.431	0.2894 (15) S=0.148	0.5015 (20) S=0.012	0.4391 (23) S=0.018	-0.1791 (25) S=0.196	0.0429 (17) S=0.435	-0.3651 (13) S=0.110	-0.1459 (15) S=0.302	0.4161 (20) S=0.034	0.3003 (23) S=0.082	0.1707 (25) S=0.207
	CEBUS	0.1341 (17) S=0.304	0.4020 (13) S=0.087	0.4922 (15) S=0.031	0.2559 (20) S=0.138	0.7181 (23) S=0.001	0.7244 (25) S=0.001	-0.3012 (17) S=0.120	0.2224 (13) S=0.233	0.1006 (15) S=0.361	0.1595 (20) S=0.251	0.4346 (23) S=0.019	-0.0083 (25) S=0.484
Not Counting Less Than 100 CETECH Hrs	CETCH	0.9266 (3) S=0.123	-0.3236 (4) S=0.338	-0.1210 (6) S=0.410	0.3970 (7) S=0.189	0.7284 (5) S=0.081	0.2765 (5) S=0.326	0.9733 (3) S=0.074	-0.6779 (4) S=0.161	-0.8195 (6) S=0.023	0.4400 (7) S=0.162	0.3931 (5) S=0.256	-0.1915 (5) S=0.379
	CEBUS	99.0000 (3) S=******	99.0000 (4) S=******	0.2947 (6) S=0.285	0.0792 (7) S=0.433	0.8326 (5) S=0.040	0.9647 (5) S=0.004	99.0000 (3) S=******	99.0000 (4) S=******	0.4117 (6) S=0.209	0.0547 (7) S=0.454	0.5009 (5) S=0.195	-0.1596 (5) S=0.399
Not Counting Less Than 200 CETECH Hrs	CETCH	99.0000 (0) S=******	-0.9595 (3) S=0.091	-0.9780 (4) S=0.011	0.9926 (3) S=0.039	1.0000 (2) S=******	-0.3772 (3) S=0.377	99.0000 (0) S=******	-0.8301 (3) S=0.188	-0.6821 (4) S=0.159	-0.6636 (3) S=0.269	1.0000 (2) S=******	-0.7524 (3) S=0.229
	CEBUS	99.0000 (0) S=******	99.0000 (3) S=******	0.4710 (4) S=0.265	-0.4571 (3) S=0.349	1.00[illegible]0 (2[illegible] S=***[illegible]	0.9911 (3) S=0.042	99.0000 (0) S=******	99.0000 (3) S=******	0.9276 (4) S=0.036	-0.2459 (3) S=0.421	1.0000 (2) S=******	-0.1978 (3) S=0.437
Not Counting Less Than 300 CETECH Hrs	CETCH	99.0000 (0) S=******	-1.0000 (2) S=******	-0.9993 (3) S=0.012	0.9926 (3) S=0.039	99.0000 (1) S=******	99.0000 (1) S=******	99.0000 (0) S=******	-1.0000 (2) S=******	-0.2994 (3) S=0.403	-0.6636 (3) S=0.269	99.0000 (1) S=******	99.0000 (1) S=******
	CEBUS	99.0000 (0) S=******	99.0000 (2) S=******	99.0000 (3) S=******	-0.4571 (3) S=0.349	99.0000 (1) S=******	99.0000 (1) S=******	99.0000 (0) S=******	99.0000 (2) S=******	99.0000 (3) S=******	-0.2459 (3) S=0.421	99.0000 (1) S=******	99.0000 (1) S=******

APPENDIX 21E

CETECH & CEBUS vs. OAC & ORC
FMC - Total Group - Eliminating Different Levels of CETECH

		OSP03	OSP06	OSP09	OSP12	OSP15	OSP18	OCR	OCR	OCR	OCR	OCR	OCR
	CETCH	-0.1427 (37) S=0.200	-0.1079 (37) S=0.262	-0.1137 (37) S=0.251	-0.0278 (43) S=0.430	0.0109 (47) S=0.471	0.1885 (47) S=0.102	0.0903 (103) S=0.182	0.0952 (103) S=0.169	0.0433 (103) S=0.332	0.0496 (103) S=0.309	0.0733 (103) S=0.231	0.0554 (103) S=0.289
	CEBUS	-0.0763 (37) S=0.327	-0.0149 (37) S=0.465	-0.0667 (37) S=0.347	0.3184 (43) S=0.019	0.3149 (47) S=0.016	0.2672 (47) S=0.035	0.1670 (103) S=0.046	0.1274 (103) S=0.100	0.1685 (103) S=0.044	0.1687 (103) S=0.044	0.1769 (103) S=0.037	0.2154 (103) S=0.014
Not Counting 0 CETECH Hrs	CETCH	-0.1502 (25) S=0.237	-0.0947 (21) S=0.343	-0.0922 (21) S=0.346	-0.0077 (27) S=0.485	-0.0007 (35) S=0.498	0.1834 (33) S=0.154	-0.1522 (24) S=0.239	0.1394 (32) S=0.223	0.1332 (37) S=0.216	0.0456 (47) S=0.380	0.0564 (55) S=0.340	-0.0053 (58) S=0.484
	CEBUS	-0.0046 (25) S=0.491	0.2350 (21) S=0.153	0.1920 (21) S=0.202	0.1607 (27) S=0.212	0.3378 (35) S=0.024	0.2750 (33) S=0.061	0.3229 (24) S=0.061	0.231[illegible] (32) S=0.1[illegible]2	0.3571 (37) S=0.015	0.2735 (47) S=0.031	0.2352 (56) S=0.040	0.2485 (58) S=0.030
Not Counting Less Than 100 CETECH Hrs	CETCH	0.1967 (8) S=0.319	-0.7416 (7) S=0.028	-0.0662 (9) S=0.433	0.2823 (7) S=0.270	0.1748 (9) S=0.326	-0.0103 (11) S=0.488	0.2797 (8) S=0.251	0.3724 (10) S=0.145	0.1631 (14) S=0.289	0.0927 (15) S=0.371	0.0307 (19) S=0.450	0.0487 (23) S=0.413
	CEBUS	99.0000 (8) S=*****	99.0000 (7) S=*****	0.2802 (9) S=0.233	0.9932 (7) S=0.001	0.1275 (9) S=0.372	0.1972 (11) S=0.281	99.0000 (8) S=*****	99.0000 (10) S=*****	0.4847 (14) S=0.039	0.4851 (15) S=0.033	0.2581 (19) S=0.143	0.2072 (23) S=0.171
Not Counting Less Than 200 CETECH Hrs	CETCH	0.2733 (3) S=0.412	-0.4898 (5) S=0.201	-0.0246 (6) S=0.482	-0.5766 (3) S=0.304	-0.3771 (4) S=0.311	0.0502 (5) S=0.468	-0.4562 (3) S=0.349	0.5736 (5) S=0.156	0.4992 (7) S=0.127	0.4747 (7) S=0.141	0.0100 (10) S=0.489	0.1532 (13) S=0.309
	CEBUS	99.0000 (3) S=*****	99.0000 (5) S=*****	0.4267 (6) S=0.199	0.9998 (3) S=0.006	-0.2468 (4) S=0.377	-0.1856 (5) S=0.363	99.0000 (3) S=*****	99.0000 (5) S=*****	0.6103 (7) S=0.073	0.6610 (7) S=0.053	0.3431 (10) S=0.166	0.3530 (13) S=0.118
Not Counting Less Than 300 CETECH Hrs	CETCH	0.2733 (3) S=0.412	-0.4376 (4) S=0.261	-0.3411 (5) S=0.287	-0.5766 (3) S=0.304	-1.0000 (2) S=*****	-1.0000 (2) S=*****	-0.4562 (3) S=0.349	0.8064 (4) S=0.097	0.8989 (5) S=0.019	0.7909 (5) S=0.056	0.7076 (5) S=0.091	0.3414 (7) S=0.227
	CEBUS	99.0000 (3) S=*****	99.0000 (4) S=*****	0.6124 (5) S=0.136	0.9998 (3) S=0.006	1.0000 (2) S=*****	99.0000 (2) S=*****	99.0000 (3) S=*****	99.0000 (4) S=*****	0.6475 (5) S=0.119	0.6943 (5) S=0.097	0.6907 (5) S=0.098	0.5121 (7) S=0.120

CETECH & CEBUS vs. OSP & OCR
FMC - Total Group - Eliminating Different Levels of CETECH

APPENDIX 21G

		OAC03	OAC06	OAC09	OAC12	OAC15	OAC18	ORC03	ORC06	ORC09	ORC12	ORC15	ORC18
	CETCH	0.0077 (13) S=0.490	0.0600 (25) S=0.388	0.3380 (28) S=0.039	0.3620 (34) S=0.018	0.3964 (31) S=0.014	0.5554 (28) S=0.001	0.1587 (13) S=0.302	-0.1271 (25) S=0.272	-0.0803 (28) S=0.342	0.1089 (34) S=0.270	0.2425 (31) S=0.094	0.2407 (28) S=0.109
	CEBUS	99.0000 (13) S=*****	0.0097 (25) S=0.482	0.2422 (28) S=0.107	-0.1350 (34) S=0.223	0.1519 (31) S=0.207	0.5306 (28) S=0.002	99.0000 (13) S=*****	0.1056 (25) S=0.308	0.1292 (28) S=0.256	-0.0087 (34) S=0.480	0.1134 (31) S=0.272	0.1723 (28) S=0.190
Not Counting 0 CETECH Hrs	CETCH	-0.4408 (6) S=0.191	0.0675 (15) S=0.406	0.2687 (19) S=0.133	0.3766 (22) S=0.042	0.5165 (23) S=0.006	0.6283 (24) S=0.001	0.6142 (6) S=0.097	0.1136 (15) S=0.343	0.0529 (19) S=0.415	0.0097 (22) S=0.483	0.3184 (23) S=0.069	0.3389 (24) S=0.053
	CEBUS	99.0000 (6) S=*****	-0.1662 (15) S=0.277	0.2483 (19) S=0.153	-0.0620 (22) S=0.392	0.3034 (23) S=0.080	0.4226 (24) S=0.020	99.0000 (6) S=*****	0.3315 (15) S=0.114	-0.0041 (19) S=0.493	-0.0104 (22) S=0.482	0.0329 (23) S=0.441	0.1558 (24) S=0.234
Not Counting Less Than 100 CETECH Hrs	CETCH	1.0000 (2) S=*****	-0.3855 (8) S=0.173	0.1024 (9) S=0.397	0.4769 (10) S=0.082	0.2517 (10) S=0.241	0.5469 (13) S=0.027	1.0000 (2) S=*****	-0.2243 (6) S=0.297	0.3234 (9) S=0.198	0.0668 (10) S=0.427	0.4143 (10) S=0.117	0.0663 (13) S=0.415
	CEBUS	99.0000 (2) S=*****	99.0000 (8) S=*****	0.1815 (9) S=0.320	-0.2147 (10) S=0.276	0.3555 (10) S=0.157	0.3350 (13) S=0.132	99.0000 (2) S=*****	99.0000 (8) S=*****	-0.0333 (9) S=0.466	0.0003 (10) S=0.500	0.0351 (10) S=0.462	-0.0496 (13) S=0.436
Not Counting Less Than 200 CETECH Hrs	CETCH	99.0000 (1) S=*****	-0.4418 (5) S=0.228	-0.0932 (8) S=0.413	0.5762 (6) S=0.116	0.6371 (6) S=0.087	0.3323 (9) S=0.191	99.0000 (1) S=*****	-0.5397 (5) S=0.174	0.3014 (8) S=0.234	-0.2359 (6) S=0.326	0.2522 (6) S=0.315	-0.0692 (9) S=0.430
	CEBUS	99.0000 (1) S=*****	99.0000 (5) S=*****	0.1120 (8) S=0.396	-0.1908 (6) S=0.359	0.2547 (6) S=0.313	0.1591 (9) S=0.341	99.0000 (1) S=*****	99.0000 (5) S=*****	-0.0617 (8) S=0.442	0.0024 (6) S=0.496	-0.1510 (6) S=0.388	-0.0270 (9) S=0.473
Not Counting Less Than 300 CETECH Hrs	CETCH	99.0000 (0) S=*****	-1.0000 (2) S=*****	-0.3500 (5) S=0.282	0.6752 (5) S=0.106	0.9686 (5) S=0.003	0.8693 (7) S=0.006	99.0000 (0) S=*****	1.0000 (2) S=*****	0.2750 (5) S=0.327	-0.3291 (5) S=0.294	0.1169 (5) S=0.426	0.1297 (7) S=0.391
	CEBUS	99.0000 (0) S=*****	99.0000 (2) S=*****	99.0000 (5) S=*****	-0.3867 (5) S=0.260	0.3792 (5) S=0.265	-0.0826 (7) S=0.430	99.0000 (0) S=*****	99.0000 (2) S=*****	99.0000 (5) S=*****	-0.0203 (5) S=0.467	0.4529 (5) S=0.222	0.0023 (7) S=0.498

CETECH & CEBUS vs.OAC & ORC
Sylvania - Total Group - Eliminating Different Levels of CETECH

APPENDIX 21H

		OSP03	OSP06	OSP09	OSP12	OSP15	OSP18	OCR	OCR	OCR	OCR	OCR	OCR
	CETCH	-0.0737 (24) S=0.366	-0.2035 (36) S=0.117	-0.0651 (39) S=0.338	-0.1012 (42) S=0.262	-0.1358 (42) S=0.196	-0.0056 (37) S=0.487	0.1076 (36) S=0.266	0.2758 (36) S=0.052	0.2987 (36) S=0.038	0.2609 (36) S=0.062	0.2332 (36) S=0.086	0.2132 (36) S=0.106
	CEBUS	99.0000 (24) S=******	-0.1325 (36) S=0.221	0.7204 (39) S=0.001	0.5605 (42) S=0.001	0.3816 (42) S=0.006	0.0399 (37) S=0.407	-0.3657 (36) S=0.014	-0.3657 (36) S=0.014	-0.2866 (36) S=0.045	-0.1770 (36) S=0.151	-0.1648 (36) S=0.168	-0.0626 (36) S=0.358
Not Counting 0 CETECH Hrs	CETCH	0.2786 (13) S=0.179	-0.2730 (23) S=0.106	-0.0164 (25) S=0.458	-0.0459 (26) S=0.412	-0.0294 (30) S=0.439	-0.0559 (30) S=0.385	0.3429 (6) S=0.254	0.5258 (8) S=0.090	0.5146 (9) S=0.077	0.4198 (9) S=0.130	0.4499 (10) S=0.096	0.3112 (11) S=0.176
	CEBUS	99.0000 (13) S=******	-0.0995 (23) S=0.326	0.8988 (26) S=0.001	0.7431 (26) S=0.001	0.4565 (30) S=0.006	0.0489 (30) S=0.399	-0.9281 (6) S=0.004	-0.8958 (8) S=0.001	-0.8689 (9) S=0.001	-0.8899 (9) S=0.001	-0.6328 (10) S=0.025	-0.4830 (11) S=0.110
Not Counting Less Than 100 CETECH Hrs	CETCH	0.8562 (3) S=0.173	-0.2953 (15) S=0.143	-0.1614 (15) S=0.283	-0.1649 (15) S=0.255	-0.2279 (17) S=0.190	0.1453 (16) S=0.296	99.0000 (1) S=******	0.2750 (4) S=0.363	0.3273 (4) S=0.336	-0.2563 (4) S=0.372	0.3549 (6) S=0.245	0.1983 (6) S=0.353
	CEBUS	99.0000 (3) S=******	99.0000 (15) S=******	0.8388 (15) S=0.001	0.8141 (15) S=0.001	0.6246 (17) S=0.004	0.1367 (16) S=0.307	99.0000 (1) S=******	99.0000 (4) S=******	-0.3458 (4) S=0.327	-0.3458 (4) S=0.327	0.3012 (6) S=0.281	-0.0543 (6) S=0.459
Not Counting Less Than 200 CETECH Hrs	CETCH	1.0000 (2) S=******	-0.2195 (7) S=0.318	-0.3048 (12) S=0.168	-0.5041 (10) S=0.069	-0.2689 (11) S=0.212	0.0654 (11) S=0.424	99.0000 (0) S=******	1.0000 (2) S=******	1.0000 (2) S=******	-1.0000 (2) S=******	-0.0724 (3) S=0.477	0.8817 (4) S=0.059
	CEBUS	99.0000 (2) S=******	99.0000 (7) S=******	0.6358 (12) S=0.001	0.9090 (10) S=0.001	0.9161 (11) S=0.001	0.2332 (11) S=0.245	99.0000 (0) S=******	99.0000 (2) S=******	-1.0000 (2) S=******	-1.0000 (2) S=******	-0.7777 (3) S=0.216	0.0596 (4) S=0.470
Not Counting Less Than 300 CETECH Hrs	CETCH	99.0000 (1) S=******	99.0000 (4) S=******	0.0988 (9) S=0.400	0.0600 (9) S=0.439	0.1656 (10) S=0.324	0.1732 (9) S=0.328	99.0000 (0) S=******	99.0000 (1) S=******	99.0000 (1) S=******	-1.0000 (2) S=******	-0.0724 (3) S=0.477	0.4607 (3) S=0.348
	CEBUS	99.0000 (1) S=******	99.0000 (4) S=******	0.6250 (9) S=0.036	0.1556 (9) S=0.345	0.3546 (10) S=0.157	0.0267 (9) S=0.473	99.0000 (0) S=******	99.0000 (1) S=******	99.0000 (1) S=******	-1.0000 (2) S=******	-0.7777 (3) S=0.216	-0.2446 (3) S=0.421

CETECH & CEBUS vs. OSP & OCR
Sylvania - Total Group - Eliminating Different Levels of CETECH

FORD

DIFFERENT LEVELS OF CETECH HOURS	OCM03	OCM06	OCM09	OCM12	OCM15	OCM18
All	0.1564 (63) S=0.111	0.0467 (80) S=0.340	-0.2120 (73) S=0.036	-0.1975 (76) S=0.044	-0.0930 (70) S=0.222	-0.0971 (50) S=0.251
> 0	-0.1913 (35) S=0.135	-0.2767 (54) S=0.021	-0.1948 (53) S=0.081	-0.1583 (60) S=0.099	0.0100 (53) S=0.472	0.0028 (37) S=0.493
> 100	99.0000 (11) S=******	-0.3519 (21) S=0.059	-0.2780 (23) S=0.100	-0.2281 (27) S=0.126	0.0144 (21) S=0.475	-0.1898 (15) S=0.249
> 200	99.0000 (6) S=******	-0.1661 (12) S=0.303	-0.1927 (17) S=0.229	-0.0639 (17) S=0.404	0.0829 (14) S=0.389	0.1675 (8) S=0.346
> 300	99.0000 (3) S=******	-0.2513 (7) S=0.293	-0.2100 (11) S=0.268	-0.0947 (12) S=0.365	0.3515 (9) S=0.177	0.1993 (6) S=0.353

FMC

	OCM03	OCM06	OCM09	OCM12	OCM15	OCM18
All	-0.0396 (38) S=0.407	0.0370 (40) S=0.410	-0.2681 (39) S=0.049	-0.1977 (43) S=0.102	-0.1466 (49) S=0.157	-0.2925 (48) S=0.022
> 0	-0.0370 (25) S=0.430	0.0474 (21) S=0.419	-0.4276 (21) S=0.027	-0.1858 (28) S=0.172	-0.2539 (37) S=0.065	-0.3579 (34) S=0.019
> 100	99.0000 (6) S=******	99.0000 (7) S=******	-0.3295 (9) S=0.193	-0.5044 (7) S=0.124	0.0232 (9) S=0.476	-0.2217 (11) S=0.256
> 200	99.0000 (3) S=******	99.0000 (5) S=******	-0.3367 (6) S=0.257	-0.9970 (3) S=0.025	0.2832 (4) S=0.358	0.5255 (5) S=0.182
> 300	99.0000 (3) S=******	99.0000 (4) S=******	-0.1961 (5) S=0.376	-0.9970 (3) S=0.025	99.0000 (2) S=******	99.0000 (2) S=******

NASA

DIFFERENT LEVELS OF CETECH HOURS						
All	-0.0924 (41) S=0.283	-0.0639 (49) S=0.331	-0.1890 (47) S=0.102	-0.2421 (55) S=0.037	-0.3848 (47) S=0.004	-0.4073 (38) S=0.006
> 0	-0.1132 (27) S=0.287	-0.0577 (35) S=0.371	-0.1949 (43) S=0.114	-0.2351 (49) S=0.038	-0.4077 (38) S=0.006	-0.5462 (28) S=0.001
> 100	-0.3665 (17) S=0.074	-0.1792 (27) S=0.186	-0.1865 (28) S=0.171	-0.3184 (35) S=0.031	-0.4119 (25) S=0.020	-0.5410 (19) S=0.008
> 200	99.0000 (11) S=******	0.1335 (23) S=0.272	-0.1923 (26) S=0.173	-0.3343 (29) S=0.038	-0.4381 (21) S=0.023	-0.6366 (13) S=0.010
> 300	99.0000 (7) S=******	0.1054 (19) S=0.334	-0.2337 (22) S=0.148	-0.3856 (26) S=0.026	-0.5450 (18) S=0.010	-0.7392 (11) S=0.005

SYLVANIA

All	99.0000 (26) S=******	0.2206 (38) S=0.092	-0.3758 (40) S=0.008	-0.2060 (43) S=0.093	-0.3028 (43) S=0.024	-0.2018 (37) S=0.116
> 0	99.0000 (14) S=******	0.1352 (24) S=0.264	-0.3930 (27) S=0.021	-0.3030 (27) S=0.062	-0.3062 (31) S=0.047	0.0512 (30) S=0.394
> 100	99.0000 (4) S=******	99.0000 (14) S=******	-0.4045 (14) S=0.076	-0.5123 (15) S=0.025	-0.3514 (17) S=0.083	0.0971 (16) S=0.360
> 200	99.0000 (2) S=******	99.0000 (6) S=******	-0.3562 (11) S=0.141	-0.5186 (10) S=0.062	-0.2375 (11) S=0.241	0.0650 (11) S=0.425
> 300	99.0000 (1) S=******	99.0000 (3) S=******	-0.1429 (6) S=0.368	0.5756 (9) S=0.052	-0.0420 (10) S=0.454	-0.0544 (9) S=0.445

APPENDIX 22

CEBUS vs. OCM

FORD - NASA - FMC - SYLVANIA - ELIMINATING DIFFERENT LEVELS OF CETECH

EXPLANATION OF KEY STATISTICAL TERMS

A number of kinds of people reading this Report will have no background in statistics or in the other mathematical and physical sciences. Included in this group would typically be training directors, managers without degrees in engineering or the sciences and professionals in fields such as medicine, nursing, law, education, etc.--all of whom will have an interest in the results of this Study. For this reason, a simplified explanation of the key terms used in the analysis is provided:

Frequency Distribution

A tabulation or a graphical presentation of a set of observations or data relating to a given variable, i.e., the number of hours of technical continuing education taken by individuals in a given organization at some point in time since graduation.

Bi-Variate Correlation

Correlation analysis provides a technique for measuring the linear relationship between two variables (i.e., drive vs. compensation) and produces a summary statistic describing the strength of the relationship; this statistic is known as the correlation coefficient. For the data presented in this Report, linear relationships and normal distributions are assumed, and for these data the product-moment correlation coefficient (Pearson's R) is used. Quantitatively, R^2 expresses the percentage of the variation in one variable that can account for a change in the other variable (i.e., if X and Y are two variables and R = 0.4, then 16% of the variation in Y can be attributable to X--the remaining 84% would be attributable to other factors). If the R between X and Y is positive, it means that if X increases Y will also increase. If R is negative, then if X increases, Y will decrease. In the computer program used (SPSS)*, what is tabulated includes R, the number of observations in the sample (shown under R in parentheses) and the level of statistical significance (s) of the coefficient R. Note that the bi-variate correlation coefficient R does not necessarily represent the true relationship between variables; its value may be confounded with the effects of other correlated independent variables. Therefore, bi-variate correlation analysis is used primarily to give clues as to where strong relationships might exist.

Statistical Significance

Statistical significance (s) is the probability that the observed relationship could have happened by chance, i.e., the probability that in a representative sample of a given size the variables would exhibit a relationship as strong as the observed relationship. It has become convention in social science to accept as statistically significant relationships which have a probability of occurring by chance 5% of the time or less, i.e., in 5 out of 100 samples. Statistical significance depends not only on the strength of the observed relationship but on the size of the sample. In large samples, even weak relationships may prove to be statistically significant. For example, a 100 X 100 correlation matrix generated from a file of totally random numbers produces almost 5,000 unique correlation coefficients. Within this correlation matrix there will likely be 5 large correlation coefficients significant at the .001 level, 50 at the .01 level, and 250 at the .05 level. Therefore, it is important to look for a "pattern" of significance and beware of isolated cases in which the statistical significance appears high. Also, tests of statistical significance only indicate the likelihood that an observed relationship actually exists in the universe; they do not tell how strong the relationship is. Strength is measured by R.

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* "Statistical Package for the Social Sciences"; NIE, Hull, Jenkins, Steinbrenner, Bent; McGraw-Hill Co.

Bi-Variate Linear Regression

This describes the process of fitting the best straight-line approximation to the relationship between two variables, in which the actual data points are plotted (scattergram) against one another. After a regression line has been determined, R is the statistic that measures the usefulness of the line for estimating purposes. R will have a value close to zero for a line incapable of prediction and close to ± 1 for a line capable of nearly perfect prediction. The equation:

$$Y = A + BX$$

describes the straight-line approximation between Y and X. The constant A is the point where the line crosses the Y axis (X = 0) and B represents the non-standardized regression coefficient, i.e., the expected change in Y with a change of one unit of X.

When both X and Y are standardized to have unit variance (i.e., the standard deviations of both X and Y = 1), the regression coefficients beta_{xy} beta_{yx} will not only be equivalent to each other but will be equivalent to the simple correlation.

$$\text{beta}_{yx} = \text{beta}_{xy} = R_{xy}$$

Beta's are used in this latter expression to indicate that they have been computed on standardized X and Y values rather than the original unstandardized values.

While beta does not enable one to estimate Y values in the original raw value units, the standardized regression coefficient is more convenient to use in a number contexts. Working with beta's enables one to simplify the linear regression equation, since constant A (the Y intercept) is always equal to zero and, therefore, can be omitted. Furthermore, when there are two or more independent variables measured in different units (such as income in dollars and education in years), standardized coefficients provide the only sensible way to compare the relative effect on the dependent variable of each independent variable.

Multiple Regression

Multiple regression is an extension of the bi-variate correlation coefficient to multivariate analysis. Multiple regression allows the researcher to study the linear relationship between a set of independent variables and a dependent variable while taking into account the interrelationships among the independent variables. The basic goal of multiple regression is to produce a linear combination of independent variables which will correlate as highly as possible with the dependent variable. This linear combination can then be used to "predict" values of the dependent variable, and the importance of each of the independent variables in that prediction can be assessed. The multiple regression equation takes the form:

$$Y = A + B_1X_1 + B_2X_2 + B_3X_3 + \dots B_nX_n$$

where $X_1 \dots X_n$ represent different variables and $B_1 \dots B_n$ represent non-standardized regression coefficients. In this equation, the effects of all terms add linearly. If all terms but one are held constant, then the change in Y due to a one unit change in X_n would be B_n. The B's represent partial regression coefficients which can be different from the bi-variate equivalent coefficients because the bi-variate coefficients are confounded by the effects of the other variables. In the multiple regression equation, all variables are treated separately and each variable is added for its incremental contribution in a separate step after all other variables have been included. Again, the regression coefficients can be standardized and designated as "beta's". When beta's are used, it is possible to compare directly the contribution to the overall correlation of each variable of interest. In the data presented, "R^2 change" also measures directly the contribution of each variable of interest. As in the bi-variate case, the proportion of variance of Y explained, i.e., the goodness of fit of the regression equation, can be evaluated by examining the square of the multiple correlation:

$$R^2 = \frac{\text{variation in Y explained by the combined linear influence of the independent variables}}{\text{total variation in Y}}$$

In the standard regression method used, the increment in "multiple R^2" due to the step-wise addition of a given variable is taken as the component of the variation attributable to that variable.

The specific terms used in the multiple regression data shown in Appendices 10 through 19 are:

simple R - already explained
multiple R - the combined correlation coefficient taking into account that term and all previous terms in the regression.
R^2 - already explained
R^2 change - already explained
B - the linear regression coefficient - already explained - which has different units for different variables.
beta - the normalized regression coefficient - already explained - which allows a direct comparison of the effects of the different variables.
constant - already explained - is the constant in the non-normalized regression equation.

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